INDEX TO THE EPITOME FOR VOLUME I, 1926.

READERS in search of a particular subject will find it useful to bear in mind that the references are in several cases distributed under two or more separate but nearly synonymous headings—such, for instance, as Brain and Cerebral; Heart and Cardiac; Liver and Hepatic; Renal and Kidney; Cancer and Carcinoma; Epithelioma, Malignant Disease, New Growth, Sarcoma, etc.; Child and Infant; Bronchocele, Goitre, and Thyroid; Diabetes, Glycosuria, and Sugar; Eye, Ophthalmia, and Vision, etc.

The Figures in this Index refer to the Number of the Paragraph, NOT the Page.

A.

Abdominal operations, upper, anaesthesia for, 547
ABEL, E.: The bacteriological diagnosis of botulism, 223
ABELHEIM, A.: Treatment of puerperal fever, 403
Abortion, infectious, of cattle, the relation between Malta fever and, 642
Abortion, repeated, treatment of, 576
ABRAHAM, A.: Chronic nasal diphtheria and atrophic rhinitis, 147
ABRAMOWA, A.: Bursal exostosis, 34
Abscess, intracranial, 209
Abscess of larynx, 448
Abscess of liver, treatment of, 36
Abscess of lung simulated by pulmonary carcinoma, 155
Abscess, peritonsillar, treatment of, 588
Abscess, pulmonary, and pneumothorax in pertussis, 607
Abscess, splenic, in typhoid fever, 447
Abscess, subphrenic, 364
Abscess of tibia, chronic, 619
Abscess, typhoid, of the breast, 590
Acetonaemia, infantile, 426
Acetylorthocresotinic acid, the indications for, 497
Acne treated by testicular implantations, 266
Acne varioliformis, attenuated forms of, 295
Acriflavine in epidemic encephalitis, 212—in the treatment of gonorrhoea, 545
ADAMS, D. S.: Dichloramine-T in the treatment of wounds, 676
ADAMS, S. F.: Surgery in diabetes, 542
Adenitis, post-scarlatinal, isolated, 51
Adenoma of the cervix uteri, 658
Adnexa, pregnancy in apparent absence of, 103
Adrenaline, administration of, 621
Aerophagia, the cardiac symptoms of, 278
AGDUHR, E.: Cardiac changes produced by cod-liver oil, 605
Alar ligaments, traumatic adhesion of to the femur, 317
ALBANO, G.: Late urinary sequels of gynaecological operations 352
Alcohol and the expectation of life, 560
ALDERSHOFF, H.: Scarlet fever, 90
Alkali reserve of the blood and ultra-violet radiation, 437
ALLEN, I. M.: Protein sensitivity, 334
ALLEN, M. S.: Carbon monoxide poisoning, 516
ALOIN, H.: Trigeminal lesions in mastoiditis. 325
AMBARD, L.: The effect of sodium salts on blood pressure, 380
Ammonium tartrate in lime burns of the cornea, 500
Amoebic dysentery. *See* Dysentery
AMUNDSEN, P.: *X*-ray treatment of glandular tuberculosis. 401
Anaemia, aplastic, due to *x* rays, 348
Anaemia, pernicious, and pregnancy, 434
Anaerobic bacteria in appendicitis, 640
Anaerobic infections, vaccination against, 331
Anaesthesia for upper abdominal operations, 547—Blood pressure in, 104—In young children, 301—De-etherization with carbon-dioxide, 50—Ether, in lung operations, 374—Ethylene, 548—Intraorbital, 633—Nitrous oxide, 549—Nitrous oxide and local combined, 372—In rectal operations, 105—Spinal, in urology, 373—Synergy in, 106
Anaphylaxis following administration of serum, 559
ANDERSEN, S.: Serological classification of the haemolytic streptococci, 137—The prophylaxis of measles, 465
ANDREI, O.: Estimation of the date of a fracture, 618
Aneurysm, cerebral, causing ocular symptoms, 502
Aneurysm of the heart, 585
Aneurysms, bilateral popliteal, 581
Angina pectoris, results of sympathectomy in, 123—Surgical treatment of, 210
Angina, Vincent's, stovarsol in, 215
Anthrax, the mechanism of infection in, 85
Antibodies in tuberculous pleural fluids, 88—Production of by artificial pneumothorax, 603
Antimony trichloride in lupus, 453
Antirachitic value of fresh spinach, 407
Antiseptic, urinary, hexyl resorcinol as a, 101
Antityphoid inoculation, 468
Aorta, compression of in post-partum haemorrhage, 376
Aortitis, non-syphilitic, 3
Aortitis, rheumatic, 538
Aortitis, syphilitic, the incidence of, 363
Aplastic anaemia. *See* Anaemia
Apophysitis of the os calcis, 33
APPELMANS, R.: Gastro-jejuno-colic fistulas, 289
Appendicitis, anaerobic bacteria in, 640
Appendicitis, the blood picture in the diagnosis of, 390
Appendicitis in old age, 63
Appendicitis and pregnancy, 354
APPERLY, F. L.: Treatment of gastric dyspepsias, 570
ARGUARD: Rhino-scleroma of the pharynx, 528
ARGY, W. P.: Hyperglycaemia without acetonuria, 117
ARLOING, F.: Infectivity of tuberculous filtrates, 199—The presence of a transmissible lytic agent in water, 249
ARMAND-DELILLE, P. F.: Artificial pneumothorax in children, 386
Arsenical treatment, hepatic symptoms during, 237
Arsphenamine, administration of, 501
Arterial pressure after cervical sympathectomy, 388
Arterio-mesenteric ileus, acute, 62
Artery, external carotid, cerebral thrombosis following ligature of the, 649
Arthropathy as an initial symptom of tabes, 230
Artificial pneumothorax. *See* Pneumothorax
Ascites, hypogenital, 227
ASCOLI, M.: Sequels of resection of the stomach, 469
Asthma, bronchial, in children and young adults, 359—Surgical treatment of, 617—Ephedrine in, 622
Asthma, cardiac, 410
Asthma, fatal, 514
Asthma and foreign proteins, 1
Asthma, treatment of, 99—With tuberculin, 69—With adrenaline, 99—With theobromin preparations, 99—Ultra-violet rays in, 321
Astringent, intestinal, tannic acid as, 297
Athletic training causing bradycardia, 490
Atophanyl in rheumatism, 544
Atophan, absorption of through the skin, 498
Atrophy, peroneal, the inheritance of, 486
AUBERT, L.: Treatment of cancer of the cervix, 460
AUDEN, G. A.: Mental changes in encephalitis lethargica, 164
Auditory apparatus, the effect of electric shocks on the, 327
Auditory nerve, tumour of the, 654
AUMONT: Blood transfusion in post-operative collapse, 97
AURICCHIO, L.: Glycaemia in the newborn, 178
AUVRAY: The diagnosis of lipomata, 565—Chronic abscess of the tibia, 619
Axillary prolongation of the breast, 553

B.

BABÈS, A. A.: Pseudo-neoplastic tuberculosis of the body of the uterus, 529
BABONNEIX, L.: Diabetes insipidus of syphilitic origin, 387
Bacilli, diphtheria, the intracutaneous method of testing for the virulence of, 661
Bacilli, fusiform, and spirochaetes, infections by, 119
B. abortus, morphology of, 200
B. melitensis, morphology of, 200—Immunization against, 201
B. typhosus, virulence of for the oyster, 50—Filterable forms of in the stools of convalescents, 512
Bacillus of tubercle. *See* Tubercle
Bacteria, anaerobic, in appendicitis, 640
Bacteria, filter-passing forms of, 355
Bacterial diastase, the coagulation of egg-yolk by a, 484
BADER, C. W.: Van den Bergh's test in pregnancy diseases, 482
BAETZNER, W.: Radiography of the gall bladder, 216
BAILLY, J.: The action of mixtures of rabies and herpes virus, 202—Inoculation of herpes febrilis, 333
BAKER, T.: Non-venereal prostatitis, 290
BALARD, P.: Version in central placenta praevia, 44
BANNERMAN, R. G.: Action of mercury vapour arc baths upon the blood, 357
BARACH, A. L.: Oxygen treatment in pneumonia, 394
BARBATO, M.: Mumps with visceral complications and death, 143
BARBER, H. W.: Lichen nitidus, 595
BARGEN, J. A.: Chronic colitis, 314
BAROTTE, J.: Vaccination against anaerobic infections, 331
BÁRSONY, T.: Dilatation of Stenson's duct, 152
Basal metabolism: In cancer of the stomach, 26—In pulmonary tuberculosis, 250—In artificial pneumothorax, 406—The spleen and, 485—During pregnancy, 510
BASS, M. H.: Cardiac extra-systoles in childhood, 384
Baths, mercury vapour arc, action of upon the blood, 357
BATTAGLIA, F.: Lymphosarcoma, 65
BAUER, E. L.: The protein content of toxin-antitoxin, 536
BAUER, J. H.: Immunization by tetanus bacilli in the digestive tract, 579
BAUMAN, G. I.: Resection of long bones for osteomyelitis, 285
BAUMM, P.: Pelvic examination during labour, 554
BAYER, W.: Active immunization against diphtheria, 255
BÉCART, A.: Blood transfusion in potassium chlorate poisoning, 188
BECKER, S. W.: Tryparsamide in neuro-syphilis, 451
BÉCLÈRE, M.: A pulsating sacral tumour, 120
BÉGHIN, R.: Hydatidiform mole, 75
BEISKEN, W.: Measles and tuberculosis, 361
BELL, G.: Plexiform neuromata, 32
BELL, W. Blair: Suture of the uterus after Caesarean section, 459
BELLER, A. J.: Strangulated hernia, 543
BELLOT, A.: The treatment of keloid, 121
BELLUCCI, L.: Rare fungus infections, 436
BÉNARD, R.: Ventricular bradyrhythmia due to septal necrosis, 582
BENEDETTI, C.: Sanocrysin in pulmonary tuberculosis, 38
BENOIT, C.: The therapeutic use of infra-red rays, 160
Benzol poisoning, chronic, fatal maxillary necrosis in, 446
BÉRARD, L.: Treatment of Pott's disease in adults, 472
BERGER, S. S.: Liver function tests, 557
BÉRIEL, L.: Peripheral forms of epidemic encephalitis, 2
BERMAN, L.: Calcium metabolism and parathyroid extract, 463
BERMAN, S.: Conservative treatment of eclampsia, 133
BERNARD, H.: Pleurisy in scarlet fever, 282
BERNHARD, F.: Ectopia testis, 10
BERNHARDT, R.: The etiology of psoriasis, 267
BERTOYE, P.: Spasmophilia, 408
BERTRAND: Hepatic symptoms during arsenical treatment, 237
BESSEMANS, A.: Asthma and foreign proteins, 1

BEZANÇON, F.: Stages in the development of the tubercle bacillus, 176—Pulmonary tuberculosis following surgical operations, 535—Rheumatic aortitis, 538—The spirochaete of tuberculous haemoptysis, 578
BIE, V.: Sanocrysin in pulmonary tuberculosis, 37, 423
BLITEL, J.: Foreign bodies in the bronchi, 96
Biliary tract, recurrent pain after operations on the, 417
Bipp, the use of in osteomyelitis, 125
BIRKHAUG, K. E.: The blanching phenomenon in scarlet fever, 113
Birth, spontaneous, of the transversely placed head, 635
Bismuth hydroxide in syphilis, 71
Bismuth subnitrate, poisoning following the oral administration of, 645
"Bismuth-diasporal," toxic effects of, 368
BITTMANN, O.: Lumbar pain treated by sympathectomy, 259
Black tongue. *See* Tongue
Bladder, purpura haemorrhagica of the, 31
BLAKIE, N. H.: *X* rays in the diagnosis of intestinal tuberculosis, 350
BLANC, G.: The production of ozaena, 83
BLATHERWICK, N. R.: Dietary in diabetes, 313
Bleeding. *See* Haemorrhage
Blister fluid in the serum prophylaxis of measles, 537
BLONDEL, A.: Radial nerve paralysis, 4
Blood, alkali reserve of, and ultra-violet radiation, 437
Blood calcium in eclampsia, 332
Blood cells, red, sedimentation rate of, 556
Blood corpuscles, red, the significance of reticulation in, 581
Blood, malarial, preparation of for treatment of general paralysis, 405
Blood, action of mercury vapour arc baths upon, 357
Blood picture in the diagnosis of appendicitis, 390
Blood pressure: In tuberculosis, 27, 28—In anaesthesia, 104—The effect of sodium salts on, 380, 381
Blood pressure, high, 89—Prognosis for, 142
Blood sugar, effects of quinine on, 112
Blood transfusion: In post-operative collapse, 97—In potassium chlorate poisoning, 183
BLOOM, W.: Splenomegaly of the Gaucher and Niemann types, 311
BLUM, G.: Pernicious anaemia and pregnancy, 434
BLUM, P.: Congenital syphilis of the joints, 118
BOENNINGHAUS, G.: Hysterical paralysis of the palate following diphtheria, 610
BÖHM: Prognosis in uterine cancer, 195
BOLTEN, G. C.: Progressive muscular dystrophy in congenital syphilis, 57
BONANI, G.: Periarterial sympathectomy, 59
Bone dystrophy in carcinoma of the breast, 391
Bones, long, resection of for osteomyelitis, 285
BONNET, H.: The serum prophylaxis of measles, 281
Boric glycerin in post-operative urinary retention, 126
BOSTLUND, M.: Atophanyl in rheumatism, 544
Botulism, the bacteriological diagnosis of, 223
BOUMAN, L.: Irregularity of the pulse in epidemic encephalitis, 204
BOWDEN, Ruth: Dieting in diabetes, 313
BOWING, H. H.: Treatment of carcinoma of the cervix, 509
BOWLER, J. P.: Treatment of obstructive jaundice, 94
BOWMAN, J. T.: The inheritance of peroneal atrophy, 486
BOYCOTT, A. E.: The influence of fatigue on infection, 226
BOYD, W.: Spontaneous rupture of oesophagus, 521
BOYER, L.: The virulence of *B. typhosus* for the oyster, 50
BRADY, L.: Treatment of gonorrhoeal endocervicitis, 110
Bradycardia due to athletic training, 490
Bradyrhythmia, ventricular, due to septal necrosis, 582
Brain tumours in children, 130
BRANNAN, D.: Corpus luteum necrosis in hyperemesis gravidarum, 377
Breast, haemangioma of, 234—Axillary prolongation of, 553—Typhoid abscess of, 590
BRIDGMAN, E. W.: Pulmonary tuberculosis and pregnancy, 431
BRINDEAU: Vesicular mole and chorion-epithelioma, 506
BRINDEAU, A.: Suprapubic transperitoneal Caesarean section, 657
Bromide treatment of epilepsy, 128
Bromide, sodium, treatment of hyperchlorhydria by, 367
Bronchi, foreign bodies in, 96
Bronchial affections, iodized oil in, 594
Bronchial asthma. *See* Asthma
Broncho-pneumonia of infants, treatment of, 524
BROUWER-FROMMANN, Hélène M.: Prophylactic and curative value of pertussis vaccine, 343
Brow presentations, 21
BROWN, A.: Chronic intestinal dyspepsia in children, 138—The metabolism in marasmic infants, 309
BRÜHL, R.: Spontaneous birth of the transversely placed head, 635
BRUHNS, C.: The incidence of syphilitic aortitis, 363
BRUNETTI, F.: The Wassermann reaction in congenital syphilis, 275
BRUSHFIELD, T.: The plantar lines in mental defectives, 166
BRYAN, Ll.: Infectious muscular erosion, 563
BULSON, A. E.: Osteomyelitis of the frontal bone, 445
BURN, J. H.: Action of histamine, 604
Burns of the cornea by lime, ammonium tartrate in, 500
Bursal exostosis, 34
BUSACCA, G.: Structure of the nasal polypus, 225
BUSSIERE, H. C.: Rheumatic fever and chorea in children, 203
BUTOMO, W. L.: Intraperitoneal bleeding from uterine chorion-epithelioma, 551
BUTTERFIELD, P. M.: Treatment of posterior gonorrhoeal urethritis, 230
BYRNE, J.: The pupils in somatic and visceral disorders, 477

C.

Caecum, tuberculosis of the, 562
Caesarean section: The low cervical operation in, 220—The scar after a cervical, 429—Suture of the uterus after, 459—Suprapubic transperitoneal, 657
CAHN, R.: The effect of sodium salts on blood pressure, 380
CALAMIDA, U.: The effect of electric shocks on the auditory apparatus, 327
Calcium in ovarian insufficiency, 652
Calcium lactate in migraine, 371
Calcium metabolism and parathyroid extract, 463
Callus formation and restoration of function, 23
CALMANN: Pituitary extract for the induction of labour, 530
CAMPBELL, H. E.: Resection of long bones for osteomyelitis, 285
Camphor, intravenous injection of, 347
Cancer of the breast, *x* rays in, 351—Bone dystrophy in, 391
Cancer of the breast, inoperable, radiological treatment of, 397
Cancer of the cervix, treatment of, 460, 509
Cancer, deodorants in, 395
Cancer, dermatoses as premonitory symptoms of, 58
Cancer and heredity, 464
Cancer of the lungs following tar applications to the skin, 87—Simulating lung abscess, 155
Cancer of ovary, 480
Cancer of the skin, 586
Cancer of the stomach, basal metabolism in, 26
Cancer and tuberculosis, interaction of, 532
Cancer of uterus, prognosis in, 195
CANTERO, A.: Bacteriology of goitre, 310
CAPPELL, D. F.: Chordoma of the cervical vertebrae, 656
Carbon dioxide, effect of on the growth of the tubercle bacillus, 274—De-etherization with, 550
Carbon monoxide poisoning, 516
Carcinoma. *See* Cancer
Cardiac asthma, 410
Cardiac changes produced by cod-liver oil, 605
Cardiac extra-systoles in childhood, 384
Cardiac failure, pulsating veins in, 53.
Cardiac infarction, 276
Cardiac oedema, urea in, 11
Cardiac rhythm, the mechanism of, 441
Cardiac symptoms of aerophagia, 278
Cardiac. *See also* Heart
CARELLI, H.: Lipiodol in skiagraphy and treatment, 398
Carotid, common, partial ligature of the, 7
Carotid artery, external, cerebral thrombosis following ligature of the, 649
Carotid body, tumour of, 122
CARRAN, A.: Musculo-spiral paralysis after serum treatment, 279
CARRIÈRE, G.: The indications for acetylorthocresotinic acid, 487
CARULLA, J. E.: Basal metabolism in cancer of the stomach, 26
CASTELLANI, A.: Phosphorus in various diseases, 68—A mycological test for sugar in the urine, 440
CASTEX, M. R.: Lipiodol in skiagraphy and treatment, 398, 399
CATANEI, A.: Black tongue, 385
CATHALA, J.: The treatment of infantile bronchopneumonia, 524
CATTANEO, G.: Prostatectomy, 520
Cattle abortion. *See* Abortion
CAUFMAN, H.: Treatment of sterility in women, 375
CAUSSADE, G.: Treatment of pulmonary gangrene, 157
CAUSSIMON, J.: "Pleural epilepsy," 383
CAUTORNÉ: Stovarsol and tréparsol in congenital syphilis, 322
CAVAZZUTI, A.: Vaccine treatment of typhoid fever, 264
CENTANNI, E.: Interaction of tuberculosis and cancer, 532
Cerebral aneurysm causing ocular symptoms, 502
Cerebral thrombosis following ligature of the external carotid artery, 649
Cerebro-spinal fever in encephalitis lethargica, 435—Relapsing, 181
Cerebro-spinal fluid, cholesterol content of, in mental disease, 533—Diagnostic value of the sugar content, 307—In diphtherial paralysis, 24—Acute hypotension of, 64
Cervical spinal caries, radiographic diagnosis of, 219
Cervical sympathectomy, arterial pressure after, 388
Cervical vertebrae, fracture dislocation of the, 493—Chordoma of the, 656
Cervix, muscular attachment of, 108—Fibroma of, 577—Primary syphilis of, 602—Adenoma of, 658
CEVEY, F.: Prophylaxis against tuberculosis, 335
Chancroid, local vaccine treatment of, 324
CHARBONNEL, M.: Perforation of peptic ulcer into peritoneal cavity, 61
Charting the visual field, 632
CHATENET, Y.: The past history in late congenital syphilis, 315
Chemotherapy, intravenous, in gonorrhoea, 593
CHIARI, R.: Pregnancy in chronic leukaemia, 135
CHICK, Harriette: The antirachitic value of fresh spinach, 407
Chicken-pox followed by acute ascending myelitis, 148
Children: Acetonaemia in, 426—Amoebic dysentery in, 630—Anaesthesia in young children, 301—Artificial pneumothorax in, 386—Brain tumours in, 130—Bronchial asthma in, 359—Chronic intestinal dyspepsia in, 138—Effect of early treatment of congenital syphilis in, 298—Hyperthyroidism in, 360—Acute nephritis in, 427—Nephrolithiasis in, 628—Otitis media in, 629—Pneumothorax in, 627—Rheumatic fever and chorea in, 203—Tuberculous peritonitis in, 179—Tuberculous disease of the wrist in, 428—Vaccine treatment of typhoid fever in, 475. *See also* Infants
Chloralose in the insomnia of the insane, 238
Choking fits, hypoplasia mandibulae as the cause of, 132
Cholecystitis, acute typhoid, forty-one years after typhoid fever, 184
Cholesterin in pleural fluids, 139
Cholesterol content of the cerebro-spinal fluid in mental disease, 533
Cholesterol, irradiated, the prevention of rickets by, 379
Chordoma of the cervical vertebrae, 656
Chorea, acute, treatment of, 450
Chorea gravidarum, 508
Chorea and rheumatic fever in children, 203
Chorion-epithelioma and vesicular mole, 506—Intraperitoneal haemorrhage from, 551
CHRISTIAN, H. A.: Cardiac infarction, 276
CIGNOZZI, O.: Treatment of liver abscess, 36
CIMINATA, A.: Sequels of resection of the stomach, 470
Circulatory diseases, the phenolsulphonephthalein test in, 461
CITELLI, S.: Partial resection of the upper jaw in malignant disease of the nasal fossa and sinuses, 316
CLARK-KENNEDY, A. E.: Heart failure with normal rhythm, 141
CLEARY, R. M.: Displacements of the semilunar cartilage, 648
CLERF, L. H.: Radiography of the lungs, 218—Peroral endoscopy, 526
Club-foot, early operation for, 495
COCKAYNE, E. A.: Hypertelorism, 300
Cod-liver oil: Spray in laryngeal and tracheal tuberculosis, 369—Cardiac changes produced by, 605
COFFEY, R. C.: Colonic polyposis, 519
COHEN, M.: Corpus luteum necrosis in hyperemesis gravidarum, 377
COHEN, M. B.: Liver function tests, 557
COKKALIS, P.: Dupuytren's contraction, 256
Cold, the common, bacteriology of, 511
Cold, application of, in dermatology, 292
Colic, hepatic, pregnancy, protein shock, and, 483
Colitis, chronic ulcerative, 314
Collapse, post-operative, blood transfusion in, 97
Colloidal iodine. *See* Iodine
COLOMBIER, H.: Vaccine treatment in epidemic encephalitis, 127
Colonic polyposis, 519
COLP, R.: Strangulated hernia, 543
CONDAMIN: Nephrectomy for renal tuberculosis, 418
CONN, L. C.: The low cervical operation in Caesarean section, 220
Convalescents' serum as a protection against varicella, 277
Convulsions and tetany in whooping-cough, 54
CONWAY, J. A.: Cerebral aneurysm causing ocular symptoms, 502
COOPER, H. N.: Sedimentation rate of red blood cells, 556
CORDEY, F.: The incidence of tuberculosis, 146
CORDIER, V.: Insulin in diabetic tuberculosis, 569
Cornea, conical, 17—Inflammation of, caused by silver nitrate, 243—Ammonium tartrate in lime burns of the, 500
CORNIL, L.: The pathology of terminal gastritis in pulmonary tuberculosis, 49
Cornual pregnancy. *See* Pregnancy
Corpus luteum, cysts of, 107—Evolution of the Graafian follicle and, 353—Necrosis of in hyperemesis gravidarum, 377
COSNIER: Acriflavine in the treatment of gonorrhoea, 545
COSTA, S.: The virulence of *B. typhosus* from the oyster, 50
COURTNEY, A. M.: Chronic intestinal dyspepsia in children, 138

CRAIG, F. B.: Persistent occipito-posterior presentations, 575
CRAINICIANU, A.: Calcium in ovarian insufficiency, 652
CRAMER, A.: Local immunity in mumps, 114
CRANMER, R. R.: Diagnosis of acute pancreatitis, 6
CRAWFORD, J. H.: Urea in cardiac œdema, 11
CREYSSEL, J.: Treatment of Pott's disease in adults, 472
CRITCHLEY, M.: Brain tumours in children, 131
CRON, R. S.: Primary syphilis of the cervix, 602
Crucial ligament, anterior, restoration of ruptured, 564
Curetting, perforation of the uterus during, 136
CUSHING, E. H.: Gaucher's disease, 540
Cuti-reaction and vaccination, 580
CUTLER, C. W., jun.: Fractures of the head and neck of the radius, 419
CYRIAX, E. F.: The wrist mobility in diagnosis, 233
Cyst of mesentery in a child, 492
Cysts of the corpus luteum, 107
Cysts of pancreas, 35
Cysts of the urachus, 287

D.

DALE, H. H.: Action of histamine, 604
DAMBRIN, C.: Splenic abscess in typhoid fever, 447
DAMESHEK, W.: The significance of reticulation in the red corpuscles, 581
DANIEL, C.: Mural salpingitis, 404
DARAIGNEZ: Late perforation in typhoid fever, 144
DARIER, J.: Antimony trichloride in lupus, 453
DARLEGUY: Meningococcal ependymitis, 283
DAUTWITZ, F.: Pregnancy in chronic leukaemia, 135
DAVESNE, J.: Anaerobic bacteria in appendicitis, 640
DAVIS, G. A.: Chronic intestinal dyspepsia in children, 138
DE BESCHE, A.: Acquired immunity to tuberculosis, 52
DEBICKI, J. J.: X-ray treatment of laryngeal tuberculosis, 572
DÉBRÉ, R.: The incidence of tuberculosis, 146—The serum prophylaxis of measles, 281
DE BRUN, R.: Collapse in typhoid fever, 30
DECAM, C.: The serum prophylaxis of measles, 281
De-etherization with carbon dioxide, 550
DE GHELDERE, C.: Ultra-violet radiation and the alkali reserve of the blood, 437
DE GIRONCOLI, F.: Purpura haemorrhagica of the bladder, 31
DEGRAIS, P.: The treatment of keloid, 121
DEICHER, H.: Treatment of scarlet fever, 124
DE LAVERGNE, V.: The bacteriological diagnosis of botulism, 223
DELORE, P.: Recrudescence of encephalitis in the Parkinsonian stage, 180
Dementia præcox, etiology of, 165
DE NAZARIS, Barret: Lymphoid tumours of the nasopharynx, 655
DENNY, W. L.: Treatment of infectious skin diseases, 597
Deodorants in cancer, 395
DE PARTEARROYO, F. R.: Sanocrysin treatment of tuberculosis, 624
DEREUX: Treatment of acute chorea, 450
Dermatitis, symmetrical dysmenorrhœic, 456
Dermatology, application of cold in, 292
Dermatoses as premonitory symptoms of cancer, 58
DE ROOVER, M.: Ultra-violet radiation and the alkali reserve of the blood, 437
DESJACQUES: Perforation of the uterus during curetting, 136
DESMAREST, E.: Nitrous oxide anæsthesia, 549
DESMEDT, G.: The use of oil in artificial pneumothorax, 239
DESNOES, P. H.: Sea-sickness, 254
DEUSKAR, V. N.: Intravenous administration of emetine, 523
DEVIC, A.: Peripheral forms of epidemic encephalitis, 2
DEVRAIGNE, L.: Pernicious anæmia and pregnancy, 434 — Vesicular mole and chorion-epithelioma, 506
DEVROYE, M.: Spinal anæsthesia in urology, 373
Diabetes, surgery in, 542
Diabetes insipidus of syphilitic origin, 387
Diabetes mellitus: Clinical course of, 252—Dieting in, 313—Possibility of curing, 488—Protein therapy in, 159
Diabetes. *See also* Hyperglycæmia
Diabetic coma, insulin in, 236
Diabetic tuberculosis, insulin in, 569
Diagnosis, the wrist mobility in, 233
Diaphragm, post-encephalitic tic of the, 235
Diastase, a bacterial, the coagulation of egg-yolk by a, 484
Diathermy, in the treatment of gonorrhœa in women, 241—In acute gonorrhœal epididymitis, 396
Dichloramine-T in the treatment of wounds, 625
Diet in the pre eclamptic state, 638
Dietetic treatment of gastric ulcer, 161
Dieting in diabetes, 313
DIGBY, K. H.: The surgical treatment of gall stones, 366
Digestive tract, immunization by tetanus bacilli in the, 579
Digitalin, intravenous administration of, 102
DINSMORE, R. S.: Pre-operative treatment in exophthalmic goitre, 318—Hyperthyroidism in children, 360
Diphtheria, spread of, 55
Diphtheria, active immunization against, 255
Diphtheria bacilli, the intracutaneous method of testing for the virulence of, 661
Diphtheria followed by hysterical paralysis of the palate, 610
Diphtheria, chronic nasal, and atrophic rhinitis, 147
Diphtheria prophylaxis and Schick test, combined, 413
Diphtheria following tonsillectomy, 337
Diphtheria, treatment of, 473
Diphtheria, wound, polyneuritis following, 91
Diphtherial paralysis: The cerebro-spinal fluid in, 24
Diuretics, the use of, 522
Diverticula, rectal, 185
DOCHEZ, A. R.: Bacteriology of the common cold, 511
DONZELOT, E.: The mechanism of cardiac treatment, 441
DOTTI, P.: Etiology of Recklinghausen's disease, 454—The initial site of pulmonary tuberculosis, 606
DOUAY, E.: Adenoma of the cervix uteri, 658
DRAKE, T. G. H.: The metabolism in marasmic infants, 309
DRURY, Dana W.: Infantile otitis media, 629
DUARTE, G.: Pregnancy and appendicitis, 354
DUBOSE, F. G.: Muscular attachment of the cervix, 108
DUBREUILH, J. M.: Refined therapeutic serums, 214
DUFOUR, H.: Radial nerve paralysis, 4
DUFOURT, A.: Infectivity of tuberculous filtrates, 199
DUGUET, M.: Surgical treatment of acute pericarditis, 416
DUHEM, P.: Ultra-violet rays in asthma, 321
DUKE-ELDER, W. S.: Osmotic therapy in glaucoma, 163
DUPÉRIÉ, R.: Stovarsol and tréparsol in congenital syphilis, 322
DUPONT, R.: Molar pregnancy and hysterectomy, 305
Dupuytren's contraction, 256
DURANTE: Pregnancy in apparent absence of adnexa, 109
Duroziez, occurrence of the sign of, 467
Dysentery, amœbic, treatment of, 525—In children, 630
Dysmenorrhœa, treatment of, 80
Dysmenorrhœic dermatitis, symmetrical, 456
Dyspepsia, chronic intestinal, in children, 138
Dyspepsias, gastric, treatment of, 570
Dystrophy, progressive muscular, in congenital syphilis, 57

E.

Eclampsia, blood calcium in, 332
Eclampsia, cause of, 45
Eclampsia, conservative treatment of, 133
Eclampsia, etiology of, 198
Eczema, causation of, 455
Eczema and focal infections, 194
Eczema, infantile, treatment of, 653
Egg-yolk coagulated by a bacterial diastase, 484
EHRSTRÖM, R.: The prognosis for high blood pressure, 242
ELDRIDGE, W. A.: Carbon monoxide poisoning, 515
Electric shocks, effect of on the auditory apparatus, 327
Elephantiasis vulvæ, 531
ELIAS, H.: Insulin and pregnancy glycosuria, 169
ELLER, J. J.: Anomalous forms of Recklinghausen's disease, 228
ELWYN, H.: The cause of eclampsia, 45
EMERY, E. S.: Radiological diagnosis of pulmonary tuberculosis, 571
Emetine, intravenous administration of, 523
EMGE, L. A.: Varicose veins in the female pelvis, 270
Encephalitis, epidemic: Acriflavine in, 212—Paraplegic forms of, 489—Parkinsonism, acute, at the onset of, 145—Parkinsonism treated by stramonium, 346—Peripheral forms of, 2—Pulse irregularity in, 204—Recrudescence of, in the Parkinsonian stage, 180—Vaccine treatment in, 127
Encephalitis lethargica: Cerebro-spinal fluid in, 435—Mental changes in, 164—Trophic ulceration following, 362. *See also* Post-encephalitic
Endocarditis, the development of, 29
Endocarditis, subacute bacterial, prognosis in, 115
Endocarditis, septic, mercurochrome 220 in chronic, 291
Endocervicitis, gonorrhœal, treatment of, 110
Endometrial hypertrophy and ovarian tumours, 47
Endometrioma, 302
Endoscopy, peroral, 526
ENKLAAR, W. F.: Prophylactic and curative value of pertussis vaccine, 344
ENNEKING, J.: Weil's disease in Holland, 612
Ependymitis, meningococcal, 283
Ephedrine in bronchial asthma, 622
Epididymitis, acute gonorrhœal, diathermy in, 396
Epigastric distress, 312
Epilepsy, bromide treatment of, 128
Epilepsy, pleural, 383
Epilepsy, sugar treatment of, 15
Epithelioma of the tongue, radium in, 73
ERKES, F.: Surgical treatment of bronchial asthma, 617
ERLACHER, P.: Anæsthesia in young children, 301
Eruptions due to sanocrysin, 609
Erysipeloid in man, 611
Erythema arthriticum epidemicum, 411
Erythema infectiosum, 646
Erythema, polymorphic, acute, the cause of, 641
ETCHEGOIN, E.: The spirochæte of tuberculous hæmoptysis, 578
Ether in the treatment of suppurative otitis media, 623
Exophthalmic goitre. *See* Goitre
ESBACH, H.: Acute Parkinsonism at the onset of encephalitis, 145
ESPINOSA, L. Y.: Vaccine treatment of typhoid fever, 263
Ether in lung operations, 374
Ether injections in pertussis, 66
Ethylene as an anæsthetic, 548
EUFINGER, H: Van den Bergh's test in pregnancy diseases, 482
Exanthema subitum, 229
Exophthalmic goitre. *See* Goitre
Exostosis, bursal, 34
Exostosis of the orbit, 504
Eye infections, protein therapy in, 476
Eyes, glaucomatous, treatment of painful blind, 242
Eyes, myopic, glaucoma in, 241

F.

FABRE, R.: The prevention of rickets by irradiated cholesterol, 379
Facial paralysis, a diagnostic sign in, 608
Faeces, tubercle bacilli in, 382
FALCI, E.: Renal tuberculosis in childhood, 129
FALCONER, A. W.: Mercurochrome 220 in chronic septic endocarditis, 291
Fallopian tubes, lymphangioma of, 221—Insufflation of, 481
FANTOZZI, G.: Rectal diverticula, 185
Fatigue, influence of on infection, 226
FATOU: Congenital syphilis of the joints, 118
FAVILLI, G.: The morphology of *B. melitensis* and *B. abortus*, 200—The relation between Malta fever and infectious abortion of cattle, 642
FAVREAU: Stovarsol and tréparsol in congenital syphilis, 322
FEDELI, F.: Ectopic thyroid tumours in the neck, 186—Myxochondrosarcoma of the knee, 541
Feeding, infant, 425
FEER, E.: Treatment of infantile eczema, 653
FEINBERG, S. M.: Blood calcium in eclampsia, 332
FESSLY, R.: Insulin treatment in non-diabetics, 591
FEJER, J.: Inflammation of the cornea caused by silver nitrate, 243
FEJGIN, M.: Atypical typhoid infections, 614
Femur, traumatic adhesion of the alar ligaments to, 317
FEROND, M.: Insulin in skin diseases, 474
FERRETTI, C.: Leptomeningitis in acute otitis, 42
FERRON, L.: Acriflavine in the treatment of gonorrhœa, 545
FESSLER, A.: Filterable forms of tubercle bacilli, 555
Fever, enteric, collapse in, 30—Perforation, late, in, 144—Reactions of typhoid vaccination, 534—Serum treatment of, 39—Splenic abscess in, 447—Typhoid cholecystitis, acute, forty-one years after, 184—Vaccine treatment of, 263, 475
Fever, glandular, 336
Fever, glandular, or infectious mononucleosis, 205
Fever, Malta, relation of to infectious abortion of cattle, 642
Fever, relapsing, 284
Fever, rheumatic, and chorea, in children, 203
Fever, scarlet, 90—Blanching phenomenon in, 113—Pleurisy in, 282—Treatment of, 124
Fibroids, removal of, during pregnancy, 196
Fibroma of the cervix, 577
Fibromyomata, necrobiosis in, 20
Fibromyomata of the uterus, treatment of, 303, 304
Filter-passing bacteria. *See* Bacteria *and* Tubercle bacillus
FISCHER, L.: Insulin in infantile malnutrition, 496
FISCHER, O.: Toxic effects of "bismuth-diasporal," 368
FISHER, A. O.: Tuberculosis of the cæcum, 562
Fish-hooks, extraction of, 620
Fistulæ, gastro-jejuno-colic, 283
Fits, choking, hypoplasia mandibulæ as the cause of, 132
FITZGERALD, R. R.: Iodine in exophthalmic goitre, 261
FLETCHER, A. G.: Insulin in surgery, 320
FLORA, G. T.: The cardiac symptoms of aerophagia, 278

FLÖRCKEN, H.: Recurrent pain after operations on the biliary tract, 417
Focal infections and eczema, 193
FONTAINE, R.: Arterial pressure after cervical sympathectomy, 388
Foot-and-mouth disease, propagation of, 438
Forceps delivery in persistent occipito-posterior presentations, 328
FORD, Frances A.: Treatment of fibromyomata of the uterus, 303
Foreign bodies in the bronchi, 96
FORGET-URION: Necrobiosis in fibromyomata, 20
FORNARA, P.: The cerebro-spinal fluid in diphtherial paralysis, 24
FOSSATI, V.: Tertian malaria with a long latent period, 253
FOUCHE, C. H.: Axillary prolongation of the breast, 553
"Fourth disease" or scarlatinella, 487
FOX, C. C.: Submucous resection of the nasal septum, 491
FOX, H.: Ringworm of scalp in the adult, 457
Fracture dislocation of the cervical vertebrae, 493
Fracture, estimation of the date of a, 618
Fractures of the head and neck of the radius, 419
Fractures, subperiosteal, with persistent displacement of fragments, 319
FRANZ, J.: Glandular fever, 336
FRANZ, R.: Formation of an artificial vagina, 433
FREUND, L.: Deodorants in cancer, 395
FRIEDMANN, U.: Treatment of scarlet fever, 124
FROMENT, J.: Recrudescence of encephalitis in the Parkinsonian stage, 180
Frontal bone, osteomyelitis of the, 445
Function, restoration of, callus formation and, 23
Fungus infections, rare, 436
Furuncle, nasal, leptomeningitis due to, 326
Fusiform bacilli and spirochaetes, infections by, 119
FUSS, E. M.: The virulence of vaginal organisms, 197

G.

Gall bladder, radiography of, 216
Gall stones, the surgical treatment of, 366
GAMBLE, C. J.: Post-encephalitic tic of the diaphragm, 235
Gangrene of the leg, impending, resection of the lumbo-sacral sympathetic in, 339
Gangrene of the legs complicating measles, 558
Gangrene, pulmonary, treatment of, 157
Gangrene of scalp due to hydrogen peroxide, 392
GARDEL, G.: The effect of early treatment of congenital syphilis in children, 298
GARIPUY: Basal metabolism during pregnancy, 510
Gastrectomy, total, 518
Gastric acidity after gastro-enterostomy, 153
Gastric dyspepsias, treatment of, 570
Gastric ulcer. *See* Ulcer
Gastritis, terminal, the pathology of in pulmonary tuberculosis, 49
Gastro-enterostomy, gastric acidity after, 153
Gastro-jejuno-colic fistulas, 289
Gastroptosis, 95
Gaucher's disease, 540
GAUDIER, H.: Median sternotomy in mediastinal tumours, 539
GAVILLARD, R. D.: *X*-ray treatment of enlarged prostate, 573
GENELL, S.: The value of radiography in pregnancy, 272
General paralysis. *See* Paralysis
Genital organs of the female, colloidal iodine in tuberculosis of, 499
GÉRARD, E.: The indications for acetylorthocresotinic acid, 497
GERAUDEL, E.: Ventricular bradyrhythmia due to septal necrosis, 582
Gestation, ectopic, full term, 81, 167, 168
Gestation. *See also* Pregnancy
GIAUME, C.: Tuberculous peritonitis in children, 179
GILMAN, P. K.: Combined nitrous oxide and local anaesthesia, 372
GIORGACOPULO, D.: Fracture dislocation of the cervical vertebrae, 493
GIRGOLAFF, S. S.: The treatment of recurrent dislocations of the shoulder and patella, 258
Gland, lacrymal, anomalous duct of, 505
Glands, salivary, progressive atrophy of the, 93
Glandular fever, 336
Glandular fever, or infectious mononucleosis, 205
Glandular tuberculosis, *x*-ray treatment of, 401
Glaucoma, osmotic therapy in, 163—In myopic eyes, 241
Glaucomatous eyes, treatment of painful blind, 242
GLENNY, A. T.: Combined Schick test and diphtheria prophylaxis, 413
GLUSMANN, M.: The intracutaneous method of testing for the virulence of diphtheria bacilli, 661
Glycaemia in the newborn, 178
Glycerin, boric, in post-operative urinary retention, 126
Glycosuria in pregnancy and insulin, 169
GOECKERMAN, W. H.: Treatment of syphilis, 103
GOFORTH, J. L.: Typhoid abscess of the breast, 590
Goitre, bacteriology of, 310
Goitre, exophthalmic, the action of iodine in, 48, 261—Pre-operative treatment in, 318—Insulin in, 345. *See also* Graves's disease
Gold treatment of surgical tuberculosis, 162
GOLDBLOOM, A.: Ether injections in pertussis, 66
Gonorrhoea, ichthyol in, 13—Treatment of by diathermy (in women), 248—Chronic, in women, 507—Acriflavine in the treatment of, 545—Chronic, vaccine treatment of, 568—Intravenous chemotherapy in, 593
Gonorrhoeal endocervicitis, treatment of, 110
Gonorrhoeal urethritis, prostatic massage in, 213—Treatment of posterior, 240
GONSALEZ, H.: Lipiodol in skiagraphy and treatment, 398, 399
GOODMAN, H.: Diagnosis of ulcers of the leg, 494
GOODPASTURE, E. W.: The path of the rabies virus in the nervous system, 308
GORDON, J. K. M.: Iodized oil in bronchial affections, 594
GOUGEROT, H.: Progressive atrophy of the salivary glands, 93—Pityriasis rubra, 194
Graafian follicle and corpus luteum, evolution of, 353
GRAGERT, O.: Vesical lesions due to urotropine, 650
Granuloma, malignant, *x*-ray treatment of, 217
Graves's disease, ovarian extract in, 190. *See also* Goitre
GRÉ, J.: Insulin in diabetic coma, 236
GREENBAUM, S. S.: Protein therapy in syphilis, 189
GREENBERGER, M. E.: Diathermy in acute gonorrhoeal epididymitis, 396
GROVE, J. L.: Cornual pregnancy, 134
GRUCA, A.: Myositis ossificans, 149
GRZYWA, N.: Traumatic adhesion of the alar ligaments to the femur, 317
GÜDEMANN, J.: Insulin and pregnancy glycosuria, 169
GUILBERT, C.: *X*-ray treatment of enlarged prostate, 573
GUILLAIN, G.: The etiology of osteitis deformans, 56
GUNN, J. W. C.: Tannic acid as an intestinal astringent, 297
GUREWITSCH, G. M.: Periarterial sympathectomy, 449
GUREWITSCH, N. J.: Periarterial sympathectomy, 98
GWATHMEY, J. T.: Synergy in anaesthesia, 106
Gynaecological operations, late urinary sequels of, 352
Gynaecology, conservative treatment in, 601

H.

HABABOU-SALA, J.: Local vaccine treatment of chancroid, 324
Haemangioma of the breast, 234
Haemolytic streptococci, serological classification of the, 137
Haemoptysis, tuberculous, the spirochaete of, 578
Haemorrhage, intraperitoneal, from uterine chorion-epithelioma, 551
Haemorrhage, spontaneous meningeal, 116
Haemorrhage, post-partum, compression of aorta in, 376
Haemorrhage, retinal, synchronous with onset of menstrual period, 503
Haemorrhage, uterine, control of, 19—Functional, 552—Acute post-partum, 599
HANCOCK, A.: The cerebro-spinal fluid in encephalitis lethargica, 435
HANGER, F. M.: Bacteriology of the common cold, 511
HANNEMAN, Y.: Irregularity of the pulse in epidemic encephalitis, 204
HANSAL, P.: The pathology of terminal gastritis in pulmonary tuberculosis, 49
HARDING, A. E. Beryl: The oxygen consumption of atrophied muscles, 643
HARDING, V. J.: Treatment of hyperemesis gravidarum, 306—Diet in the pre-eclamptic state, 638
HARF, A.: Dermatoses as premonitory symptoms of cancer, 53
HASTINGS, D. R.: The significance of pleurisy, 466
HAUDUROY, P.: Filter-passing forms of bacteria, 355—Filterable forms of *B. typhosus* in the stools of convalescents, 512
Hay fever, treatment of, 293
Head, transversely placed, spontaneous birth of, 635
Hearing after the radical mastoid operation, 527
Heart, aneurysm of, 585
Heart failure with normal rhythm, 141
Heart. *See also* Cardiac
HECKSCHER, H.: The treatment of diphtheria, 473
HEIBERG, K. A.: Alcohol and the expectation of life, 560
Heliotherapy, artificial, the value of, 370
HENROTAY, J.-L.: Treatment of hyperemesis gravidarum, 79
Hepatic activity in toxaemia, 111
Hepatic colic, pregnancy, and protein shock, 483
Hepatic symptoms during arsenical treatment, 237
HERBST, R. H.: Sequels of prostatectomy, 207
HERD, S. B.: Endometrioma, 302
Heredity and cancer, 464
HERFARTH, H.: Cerebral thrombosis following ligature of the external carotid artery, 649
HERMANS, A. G. J.: Appendicitis in old age, 63
Hernia of the ovary in infants, 9
Hernia, strangulated, 543
Hernia, vaginal, 634
Herpes febrilis, inoculation of, 333
Herpes and rabies virus, the action of mixtures of, 202
Herpes zoster and varicella, relation between, 224
HERRICK, T. P.: Erythema infectiosum, 646
HERRMANN, G.: The effect of tobacco in post-encephalitic tremor, 191
HERRMANN, O.: The inheritance of acquired immunity, 439
HERROLD, R. D.: Protein therapy in resistant syphilis, 262
HERTOGHE, L.: Insulin treatment, 158
HERTZENBERG, L.: Full-term ectopic gestation, 168
HEWER, C. L.: Ethylene as an anaesthetic, 548
Hexyl resorcinol, 625—As a urinary antiseptic, 101
HIGGINS, W. H.: Incipient hypothyroidism, 5
HIGHBERGER, J. H.: Effect of carbon dioxide on the growth of the tubercle bacillus, 274
HILL, Justine H.: Treatment of infectious skin diseases, 597
HILLEMAND, P.: Ventricular bradyrhythmia due to septal necrosis, 582
Hilum tuberculosis. *See* Tuberculosis
Hip, congenital dislocation of the, 151
HISHON, D. J.: Measles complicated by gangrene of the legs, 558
HISLOP, J. G.: Infectious mononucleosis or glandular fever, 205
Histamine, the action of, 604
HITCHENS, A. P.: The reactions of typhoid vaccination, 534
HITZANIDÈS, E.: Torsion of the myomatous uterus, 402
HOCHSINGER, K.: The "fourth disease" or scarlatinella, 487
HODGES, F. M.: *X*-ray treatment of local infections, 74
Hodgkin's disease, treatment of, 12—The differential blood count in, 86—And paraplegia, 644
HOELAND, H.: Pituitary extract in induction of labour, 530
HOFBAUER, L.: Treatment of asthma, 99
HOFFMANN, E.: Trophic ulceration following lethargic encephalitis, 362
HOJER, A.: Propagation of foot-and-mouth disease, 438
Holland, Weil's disease in, 612
HOLTEN, C.: Sequels of insulin treatment, 442
HORSTERS, H.: Absorption of atophan through the skin, 498
HOSEMANN, G.: Intravenous injection of camphor, 347
HOVASSE, R.: The virulence of *B. typhosus* for the oyster, 50
HOYT, A. W.: Bilateral popliteal aneurysms, 584
HUERRE, R.: Treatment of Parkinsonism by by stramonium, 346
HUGHES, T. A.: Effects of quinine on the blood sugar, 112
HUGUENIN, R.: Vesicular mole and chorion-epithelioma, 506
Hydatidiform mole, 75, 76, 77
Hydrogen peroxide, gangrene of scalp due to, 392
Hyperemesis gravidarum, treatment of, 79, 306—Corpus luteum necrosis in, 377
Hyperglycaemia without acetonuria, 117
Hyperpiesia, sodium sulphocyanate in, 70
Hypertelorism, 300
Hyperthyroidism in children, 360—Acute post-operative toxaemia of, 587
Hypogenital ascites, 227
Hypoglycaemia, post-anaesthetic, 140
Hypoplasia mandibulae as the cause of choking fits, 132
Hypotension, acute, of cerebro-spinal fluid, 64
Hypothyroidism, incipient, 5
Hysterectomy, conservation of menstruation after, 172—And molar pregnancy, 305
Hysterotemy, anterior abdominal, 639

I.

ICHOK, G.: Periarterial sympathectomy in surgical tuberculosis, 566
Ichthyol in gonorrhoea, 13
ICOVE, M. D.: Intraorbital anaesthesia, 633
Ileus, acute arterio-mesenteric, 62
Immunity, acquired, the inheritance of, 439
Immunization by tetanus bacilli in the digestive tract, 579
INCHLEY, O.: The action of histamine, 604
Infants, subcutaneous injection of milk in, 187—The metabolism in marasmic, 309—Feeding of, 425—Acetonaemia in, 426—Insulin in malnutrition of, 496—Treatment of bronchopneumonia of, 524. *See also* Children
Infection, the influence of fatigue on, 226
Infections, acute, sugar treatment of, 67
Infections, local, *x*-ray treatment of, 74
Influenza, intravenous iodine in, 100
Infra-red rays, the therapeutic use of, 160
INGLIS, K.: Plexiform neuromata, 32
Insane, insomnia of the, chloralose in, 238
Insomnia of the insane, chloralose in, 238
Insulin in diabetic coma, 236—In diabetic tuberculosis, 569—In exophthalmic goitre, 345—In infantile malnutrition, 496—And pregnancy glycosuria, 169—In skin diseases, 474—In suprarenal insufficiency, 452—In surgery, 320, 471

Insulin treatment, 151—Sequels of, 442—In non-diabetics, 591
Insulin-glucose treatment of post-operative vomiting, 546
Intestinal affections, the use of pimpernel in, 294
Intestinal astringent, tannic acid as, 297
Intestinal tuberculosis, *x* rays in the diagnosis of, 350
Intestine, chemical changes in, 174
Intestine, small, obstruction of, 615
Intracranial abscess. *See* Abscess
Intraorbital anaesthesia. *See* Anaesthesia
Intravesical pressure, 280
Iodine, colloidal, in tuberculosis of the female genital organs, 499
Iodine in exophthalmic goitre, the action of, 48, 261
Iodine in influenza, intravenous, 100
Iodized oil in bronchial affections, 594
IONESCO, D.: Results of sympathectomy in angina pectoris, 123

J.

JACOBSEN, A. T. B.: Sequels of insulin treatment, 442
JAMESON, W. B.: Blood pressure in tuberculosis, 27
JANÉ, E.: Diagnosis of congenital syphilis, 182
JAQUELIN, A.: Pulmonary tuberculosis following surgical operations, 335
JAROTZKY, A. J.: Dietetic treatment of gastric ulcer, 161
Jaundice, obstructive, treatment of, 94. *See also* Spirochaetosis icterohaemorrhagica
JAUSION, H.: Intravenous chemotherapy in gonorrhoea, 593
Jaw, upper, partial resection of, in malignant disease of the nasal fossa and sinuses, 316
JESS, F.: Brow presentations, 21
Joint effusion, intermittent, 232
Joints, congenital syphilis of, 118
JONNESCO, T.: Results of sympathectomy in angina pectoris, 123
JÖRGENSEN, J. O.: Acquired immunity to tuberculosis, 52
JOSEPHS, H.: Post-anaesthetic hypoglycaemia, 140
JOUVEAU-DUBREUIL, H.: Bone dystrophy in carcinoma of the breast, 391
JUDD, E. S.: Surgery in diabetes, 542
Jugular vein. *See* Vein
JUSTER, E.: Treatment of Parkinsonism by stramonium, 346

K.

KALMYKOWA, M.: The intracutaneous method of testing for the virulence of diphtheria bacilli, 661
KAUDERS, O.: Preparation of malarial blood for treatment of general paralysis, 405
KAUF, E.: Bradycardia due to athletic training, 490
KEEN, J. A.: Hearing after the radical mastoid operation, 527
KELLER, H.: Etiology of surgical tuberculosis, 341
KELLER, R.: Cystic corpus luteum, 107
Keloid, treatment of, 121
Keratomalacia, nutritional, 299
KERR, H. H.: Partial ligature of the common carotid, 7
KERR, W. J.: Pulsating veins in cardiac failure, 53
KHAN, Wajid: The treatment of painful glaucomatous eyes, 242
KIAER, S.: Action of ultra-violet light on tissue cultures *in vitro*, 177
KLAUDER, J. V.: Erysipeloid in man, 611
KLAUS, E.: Treatment of dysmenorrhoea, 80
KLEIN, E.: Hydatidiform mole, 77
KLEIN, O.: Insulin in exophthalmic goitre, 345
KLINE, B. S.: A microscopical precipitation test for syphilis, 660
KLING, C.: Propagation of foot-and-mouth disease, 438
KNAPP, A.: Glaucoma in myopic eyes, 241—Exostosis of the orbit, 504
Knee, myxochondrosarcoma of, 541
Knee-joint, chronic non-specific synovitis of, 589
KOHEN, V.: Chloralose in the insomnia of the insane, 238—Stovarsol in chronic respiratory disease, 296
Koplik's spots, 414
KOSTER, H.: Spontaneous rupture of ovarian sarcoma, 78
KRAMPF: Pulmonary carcinoma simulating lung abscess, 155
KRMPOTIC, M.: The differential blood count in Hodgkin's disease, 86
Krysolgan. *See* Gold treatment of tuberculosis
KÜHNEL, P.: Sanocrysin in pulmonary tuberculosis, 37
KURE, S.: Etiology of dementia praecox, 165

L.

LABBÉ, M.: The possibility of curing diabetes, 488
LABORDE, S.: Bone dystrophy in carcinoma of the breast, 391
Labour: Brow presentations, 21—Difficult, pararectal incision in, 600—Forceps delivery in persistent occipito-posterior presentations, 328—Induction of by pituitrin, 430, 530—Pelvic examination during, 554—Persistent occipito-posterior presentations, 575—Spontaneous birth of the transversely placed head, 635
LABRY, R.: Cysts of the urachus, 287
Lacrymal gland, anomalous duct of, 505
LAEMMER, M.: Ovarian extract in Graves's disease, 190
LAGRANGE, E.: The coagulation of egg-yolk by a bacterial diastase, 484
LAGRAVINESE, N.: Parabiliary stenosis, 420
LAIRD, A. T.: *X* rays in the diagnosis of intestinal tuberculosis, 350
LAKE, R.: Oto sclerosis, 43
LANDAU, A.: Atypical typhoid infections, 614
LANKHOUT, J.: Aplastic anaemia due to *x* rays, 348
LARIMORE, J. W.: Tuberculosis of the caecum, 562
Laryngitis, tuberculous, tracheotomy in, 41
Larynx, abscess of. *See* Abscess
LASH, A. F.: Blood calcium in eclampsia, 332
LASALLE: Basal metabolism during pregnancy, 510
Lateral sinus infection, diagnosis of, 340
LATZEL, R.: Sugar treatment of acute infections, 67
LAURENTIE: Retroversion of the gravid uterus, 458
LAUTMAN, M. F.: Intravenous sulpharsphenamine in syphilis, 424
LAVAL: Rhino-scleroma of the pharynx, 528
LÄWEN, A.: Chronic non-specific synovitis of the knee-joint, 589
LEBÉE, L.: Isolated post-scarlatinal adenitis, 51
LE BRETON, P.: Displacements of the semilunar cartilage, 648
LECLERC, G.: Tumour of the carotid body, 122
LECLERC, H.: The use of pimpernel in intestinal affections, 294
LEE, B. J.: *X* rays in carcinoma of the breast, 351
LEGRAIN, P.: Application of cold in dermatology, 282
LEHOCZKY-SEMMELWEIS, K. v.: Chorea gravidarum, 508
Leishmaniasis, visceral, in Spain, 412
LEMAIRE, A.: Lipiodol in skiagraphy and treatment, 400
LEMOINE, G.: Pyelitis in the infant, 131
LENSTRUP, E.: Hypoplasia mandibulae as the cause of choking fits, 132
LEONARD, V.: Hexyl resorcinol as a urinary antiseptic, 101
Leprosy, experimental transmission of, 273
Leptomeningitis in acute otitis, 42—Due to nasal furuncle, 326
LERASLE: Treatment of Hodgkin's disease, 12
LERICHE, R.: Arterial pressure after cervical sympathectomy, 388
LEROUX-ROBERT: Cod-liver oil spray in laryngeal and tracheal tuberculosis, 369
Leucorrhoea, treatment of, 247
Leukaemia, chronic, pregnancy in, 135
LEURET, F.: Perforation of peptic ulcer into peritoneal cavity, 61—"Pleural epilepsy," 383
LEVADITI, C.: The cause of acute polymorphic erythema, 641
LEVINE, S. A.: Surgical treatment of angina pectoris, 210
LÉVY-SOLAL: Molar pregnancy and hysterectomy, 305
LEWALD, L. T.: Radiological diagnosis of gastric syphilis, 349
LEWIN, P.: Apophysitis of the os calcis, 33
LEWIS, D. M.: The spread of diphtheria, 55
LHERMITTE, J.: Diabetes insipidus of syphilitic origin, 387
LIBMAN, E.: The prognosis in subacute bacterial endocarditis, 115
Lichen nitidus, 595
LIDWILL, M.: Ether in lung operations, 374
Life expectation and alcohol, 560
Ligament, restoration of ruptured anterior crucial, 564
Ligaments, alar, traumatic adhesion of to the femur, 317
LILLIE, W. I.: Ocular signs of temporal tumours, 18
Lime burns of the cornea, ammonium tartrate, in, 500
LING, W. P.: Anomalous duct of lacrymal gland, 505
LINTHICUM, G. M.: Anaesthesia in rectal operations, 105
Lipiodol in skiagraphy and treatment, 398, 399, 400
Lipomata, diagnosis of, 565
Liver abscess. *See* Abscess
Liver function tests, 557
Liver. *See also* Hepatic
LOESER, A.: Absorption from the vagina, 82
LOGAN, A. H.: Chronic ulcerative colitis, 314
LORTAT-JACOB: Treatment of Hodgkin's disease, 12—Application of cold in dermatology, 292
LÖWY, J.: Fatal maxillary necrosis in chronic benzol poisoning, 446
LUBARSKY, B.: Haemangioma of the breast, 234
LUBASH, S.: Diathermy in acute gonorrhoeal epididymitis, 396
LUDLUM, S. D.: The physiology of menstruation, 46
Lumbar pain treated by sympathectomy, 259
Lumbar puncture in meningitis, 231
Lumbo-sacral sympathetic, resection of, in impending gangrene of the leg, 339
LUNDE, N.: Treatment of pulmonary tuberculosis with metal salts, 211
LUNDSGAARD, C.: The phenolsulphonephthalein test in renal and circulatory diseases, 461
Lung abscess. *See* Abscess
Lung operations, ether in, 374
Lungs, radiography of, 218
Lupus, antimony trichloride in, 453
LUST, M.: The treatment of latent congenital syphilis, 323
Lymphangioma of the Fallopian tubes, 221
Lymphocytosis in the sputum of tuberculous patients, the prognostic value of, 662
Lymphoid tumours of the nasopharynx, 655
Lymphosarcoma, 65
Lymphosarcoma, mediastino-pulmonary, 356
Lytic agent in water, the presence of a transmissible, 249

M.

MCAULIFFE, G. B.: Ether in the treatment of suppurative otitis media, 623
MCBEE, T. J.: Diagnosis of disease of the urinary tract in women, 659
MACCHARLES, M. R.: *X* rays in obstetrics, 171
MACDERMOT, H. E.: Ephedrine in bronchial asthma, 622
MCDONALD, E.: The physiology of menstruation, 46
MCGLINN, J. A.: Treatment of pelvic inflammation, 567
MCGRATH, J. F.: Retroposition of the uterus, 330
MCINTOSH, J. F.: Urea in cardiac oedema, 11
MCKENTY, J.: Obstruction of small intestine, 615
MACKINNON, A. P.: The use of "bipp" in osteomyelitis, 125
MACKLIN, Madge T.: The inheritance of peroneal atrophy, 486
MACLACHLAN, I. F.: Chronic intestinal dyspepsia in children, 138
MCLAUGHLIN, E. M.: Acute arterio-mesenteric ileus, 62
MCPHEDRAN, A.: Epigastric distress, 312
MAES, U.: Prolapse of rectum in the male, 651
MAESTRINI, D.: Diagnosis of early apical tuberculosis, 92
MAGIMEL, L.: Tumours caused by oil injections, 616
MAHAIM, I.: Occurrence of the sign of Duroziez, 467
MAININI, C.: Cholesterin in pleural fluids, 139
Malaria, tertian, with a long latent period, 253
Malarial blood, preparation of, for the treatment of general paralysis, 405
MALARTRE: Infectivity of tuberculous filtrates, 199
Malignant disease of the nasal fossa and sinuses, partial resection of the upper jaw in, 316
Malignant disease. *See also* Cancer
Malignant pustule. *See* Pustule
Malnutrition of infants, insulin in, 496
Malta fever. *See* Fever
Mammary tumours. *See* Tumours
MANGABEIRA-ALBERNAZ, P.: Pathogenesis of polypi of the septum, 378
MAORTÚA: Pregnancy and appendicitis, 354
MARAÑÓN, G.: Insulin in suprarenal insufficiency, 452
Marasmic infants, the metabolism in, 309
MARFAN, A. B.: Subcutaneous injection of milk in infants, 187
MARIE, A.: Chloralose in the insomnia of the insane, 238
MARTIN, H. C.: Causation of eczema, 455
MARTINDALE, L.: Treatment of fibromyomata of the uterus, 304
MARTÍNEZ, F. F.: Treatment of hyperchlorhydria by sodium bromide, 367
MARTINY, M.: Blood pressure in tuberculosis, 28
MASON, J. T.: Anaesthesia for upper abdominal operations, 547
Massage of prostate in gonorrhoeal urethritis, 213
Mastoid operation, radical, hearing after the, 527
Mastoiditis, trigeminal lesions in, 325
MATHIEU, P.: Mesenteric cyst in a child, 492
MATTEI, V.: Gastroptosis, 95
MATTERS, R. F.: Ovarian malignancy, 480
MAURICE, G.: Radiographic diagnosis of cervical spinal caries, 219
Maxillary necrosis, fatal, in chronic benzol poisoning, 446
MAYER, O.: Treatment of peritonsillar abscess, 588
Measles: Serum prophylaxis of, 281, 465, 537—And poliomyelitis, 338—And tuberculosis, 361—Duration of infectivity in, 444—Blister fluid in the serum prophylaxis of, 537—Complicated by gangrene of the legs, 558—Prophylaxis and treatment of, 613
Mediastinal tumours, median sternotomy in, 539
Mediastino-pulmonary lymphosarcoma 356
MEMBRAT, H.: Infantile acetonaemia, 426
Meningeal haemorrhage, spontaneous, 116
Meningitis, acute aseptic, 515
Meningitis, lumbar puncture in, 231
Meningococcal ependymitis, 283
Menstruation, physiology of, 46—Conservation of after hysterectomy, 172—Retinal haemorrhage synchronous with onset of, 503
Mental changes in encephalitis lethargica 164

Mental defectives, the plantar lines in, 166
Mental diseases, cholesterol content of the cerebro-spinal fluid in, 533
Mental disorder, juvenile, 479
Mercurochrome 220 in chronic septic endocarditis, 291
Mercury vapour arc baths, action of upon the blood, 357
Mesenteric cyst in a child, 492
Metabolic variations, a test for, 513
Metabolism, basal, in cancer of the stomach, 26—In pulmonary tuberculosis, 250—In artificial pneumothorax, 406—The spleen and, 485—During pregnancy, 510
Metabolism in marasmic infants, 309
Metal salts in the treatment of pulmonary tuberculosis, 211
MEYER, J.: Treatment of varicose ulcer, 288
MEYER, K. A.: Infections by fusiform bacilli and spirochaetes, 119
MICHAILOVSKY, M.: Treatment of posterior gonorrheal urethritis, 240
Migraine, calcium lactate in, 371
MILES, L. M.: Vaginal hernia, 634
Milk, subcutaneous injection of in infants, 187
MILLER, A. J.: High protein diet and renal function, 84
MILLIGAN, Sir William: Intracranial abscess, 209
MILLS, Katherine C.: Bacteriology of the common cold, 511
MILLS, P. S.: Full-term ectopic gestation, 81
MITCHELL, A. G.: Convalescents' serum as a protection against varicella, 277
MITCHELL, R.: *X* rays in obstetrics, 171
MODINOS, P.: Blister fluid in the serum prophylaxis of measles, 537
Mole, hydatidiform, 75, 76, 77
Mole, vesicular, and chorion-epithelioma, 506
MOLIN: Perforation of the uterus during curetting, 136
MÖLLER, E.: The phenolsulphonephthalein test in renal and circulatory diseases, 461
MONCRIEFF, A.: Pneumothorax in young children, 627
Mongolism, pathogenesis and treatment of, 478
MÖNKEMÖLLER: Juvenile mental disorder, 479
Mononucleosis, infectious, or glandular fever, 205
MONROE, R. T.: Radiological diagnosis of pulmonary tuberculosis, 571
MONSON, R. B. P.: Intrauterine transplantation of ovary, 637
MONTPELLIER, J.: Black tongue, 385
MONTUORO, F.: Chronic gonorrhoea in women, 507
MORÉ, J. Noguer: Eruptions due to sanocrysin, 609
MOREL, C.: Splenic abscess in typhoid fever, 447
MORHART, P. E.: The use of diuretics, 522
MORTENSEN, M. A.: Blood pressure in anaesthesia, 104
MORTON, J. J.: Cancer of the skin, 586
MOUGNEAU, R.: Tumours caused by oil injections, 616
MOURIQUAND, G.: Spasmophilia, 408
MUELLER, J. H.: The chemical nature of tuberculin, 251
MÜHLENS, P.: Treatment of amoebic dysentery, 525
MÜLLER, E.: Subperiosteal fractures with persistent displacement of fragments, 319
MULLER, G. P.: Post-encephalitic tic of the diaphragm, 235
MÜLLER, J.: The mechanism of infection in anthrax, 85
Mumps, local immunity in, 114—With visceral complications and death, 143
MÜNDEL, F.: Glandular fever, 336
MUÑOYENO, J. A.: Prophylaxis and treatment of measles, 613
Mural salpingitis, 404
MURPHY, T. B.: Pulmonary malignancy following tar applications to the skin, 87
Muscle balance, ocular, estimation of the, 16
Muscles, atrophied, the oxygen consumption of, 643
Muscular erosion, infectious, 563
Musculo-spiral paralysis after serum treatment, 279
Mycosis, metastatic intraocular, 631
Myelitis, acute ascending, following chicken-pox, 148
Myomatous uterus, torsion of, 402
Myopic eyes, glaucoma in, 241
Myositis ossificans, 149
Myxochondrosarcoma of the knee, 541

N.

Narcolepsy as a post-encephalitic syndrome, 647
Nasal fossa and sinuses, partial resection of the upper jaw in malignant disease of the, 316
Nasal furuncle. *See* Furuncle
Nasal polypus, structure of, 225—Pathogenesis of, 378
Nasal septum, submucous resection of the, 491
Nasopharynx, radium therapy in tumours of the, 421—Lymphoid tumours of the, 655
NEAL, Josephine B.: Spontaneous meningeal haemorrhage, 116
NEAME, H.: The treatment of painful glaucomatous eyes, 242
Neck, ectopic thyroid tumours in, 186
Necrobiosis in fibromyomata, 20
Necrosis of corpus luteum in hyperemesis gravidarum, 377
Necrosis of septum causing ventricular bradyrhythmia, 582
Needles, extraction of, 620
Neosalvarsan followed by traumatic psoriasis, 598
Nephrectomy for renal tuberculosis, 418
Nephritis, acute, in children, 427
Nephrolithiasis in children, 628
Nerve, auditory, tumour of the, 654
Nerve, radial, paralysis of, 4
Nervous system, the path of the rabies virus in, 308
NETTER, A.: Relation between herpes zoster and varicella, 224
NEULEN, E. N.: Retinal haemorrhage synchronous with onset of menstrual period, 503
NEUMAN, L.: Non-syphilitic aortitis, 3
NEUMANN, H. O.: Endometrial hypertrophy and ovarian tumours, 47
NEUMANN, O.: Compression of aorta in post-partum haemorrhage, 376
Neuromata, plexiform, 32
Neuro-syphilis, tryparsamide in, 451
Newborn, glycaemia in, 178
NEWCOMET, W. S.: Control of uterine haemorrhage, 19
NEWTON, F. C.: Surgical treatment of angina pectoris, 210
NICHOLAS, F. G.: Radiological treatment of inoperable carcinoma of the breast, 397
NICHOLS, H. J.: The reactions of typhoid vaccinations, 534
NICHOLS, J. B.: Sodium sulphocyanate in hyperpiesia, 70
NICOLAU, S.: The cause of acute polymorphic erythema, 641
NICOLAYSEN, K.: Gastric acidity after gastro-enterostomy, 153
NIEDERMEYER: Dangers of pubiotomy, 329
NISHIDA, H.: Aneurysm of the heart, 585
Nitrous oxide anaesthesia, 549
Nitrous oxide and local anaesthesia, combined, 372
NOBÉCOURT, P.: Isolated post-scarlatinal adenitis, 51
NORWOOD, V.: Pulmonary tuberculosis and pregnancy, 431
NOVAK, E.: Functional uterine haemorrhage, 552
NOVAK, J.: Treatment of repeated abortion, 576
NOVELLO, N. J.: Chemical changes in the intestine, 174

O.

O'BRIEN, C. S.: Estimation of the ocular muscle balance, 16
Obstetric practice, thymus extract in, 271
Obstetrics, *x* rays in, 171
Obstruction of small intestine, 615
Occipito-posterior presentations, persistent, 328, 575—Forceps delivery in, 328. *See also* Labour
Ocular muscle balance, estimation of the, 16
Ocular signs of temporal tumours, 18
Ocular symptoms caused by cerebral aneurysm, 502
Oedema, cardiac, urea in, 11
Oesophagus, spontaneous rupture of, 521
OGINZ, P.: Anterior abdominal hysterotomy, 639
Oil in artificial pneumothorax, the use of, 239
Oil, cod-liver, spray of in laryngeal and tracheal tuberculosis, 369—Cardiac changes produced by, 605
Oil injections, tumours caused by, 616
Oil, iodized, in bronchial affections, 594
O'LEARY, P. A.: Tryparsamide in neuro-syphilis, 451
Omental strangulation, 150
Operations, surgical, pulmonary tuberculosis following, 535
OPIE, E. L.: Hepatic activity in toxaemia, 111
ORATOR, V.: Insulin in surgery, 471
Orbit, exostosis of, 504
OSAWA, Y.: Resection of the lumbo-sacral sympathetic in impending gangrene of the leg, 339
Os calcis, apophysitis of, 33
Osmotic therapy in glaucoma, 163
Osteitis deformans, etiology of, 56
Osteomyelitis: The use of "bipp" in, 125—Resection of long bones for, 285—Of the frontal bone, 445
ÖSTERGAARD, C. R.: Treatment of asthma with tuberculin, 69
Otitis, acute, leptomeningitis in, 42
Otitis media, infantile, 629
Otitis media, suppurative, ether in the treatment of, 623
Oto-sclerosis, 43
OTTOW, B.: Vesical lesions produced by sodium bromide solutions, 574
Ovarian extract in Graves's disease, 190
Ovarian insufficiency, calcium in, 652
Ovarian malignancy, 480
Ovarian tumours and endometrial hypertrophy, 47
Ovary, hernia of. *See* Hernia
Ovary, intrauterine transplantation of, 637
Ovary, prolapse of, 22
Oxygen consumption of atrophied muscles, 641
Oxygen treatment in pneumonia, 394
Oyster, the virulence of *B. typhosus* for the, 50
Ozaena, production of, 83

P.

Pain, recurrent, after operations on the biliary tract, 417
Palate, hysterical paralysis of, following diphtheria, 610
Pancreas, cysts of. *See* Cysts
Pancreatitis, acute, diagnosis of, 6
PANGALOS, G.: The production of ozaena, 83
Parabiliary stenosis, 420
Paralysis, diphtherial, the cerebro-spinal fluid in, 24
Paralysis, facial, a diagnostic sign in, 608
Paralysis, general, preparation of malarial blood for treatment of, 405
Paralysis, musculo-spiral, after serum treatment, 279
Paralysis of palate, hysterical, following diphtheria, 610
Paralysis, radial nerve, 4
PÁRAMO, A. Z.: Relapsing fever, 284
Paraplegia and Hodgkin's disease, 644
Paraplegic forms of epidemic encephalitis, 489
Pararectal incision in difficult labour, 600
Parathyroid extract and calcium metabolism, 463
Paratyphoid bacillaemia and spirochaetosis icterohaemorrhagica, 561
PARDO, J. M.: Amoebic dysentery in children, 630
PARISOT, J.: The pathology of terminal gastritis in pulmonary tuberculosis, 49
PARK, W. H.: Harmlessness of toxin-antitoxin injections, 592
PARKINSON, J.: Heart failure with normal rhythm, 141
Parkinsonism, acute, at the onset of encephalitis, 145
Parkinsonism treated by stramonium, 346. *See also* Encephalitis
Parotitis, post-operative, 365
PARSAMOW, O. S.: Formation of an artificial vagina, 433
PARTURIER, G.: Pregnancy, protein shock, and hepatic colic, 483
PATEL, M.: Cysts of the urachus, 287
Patella, congenital dislocation of, 156—Treatment of recurrent dislocations of, 258
PEIGHTAL, T. C.: Post-operative parotitis, 365
PELISSIER, P.: Treatment of senile pruritus by sodium silicate, 393
Pelvic examination during labour, 554
Pelvic inflammation, treatment of, 567
Pelvis, contracted, surgical treatment of, 170
Pelvis, female, varicose veins in, 270
PEPPER, O. H. P.: Post-encephalitic tic of the diaphragm, 235
Peptic ulcer. *See* Ulcer
Peptone, therapeutic uses of, 14
PERACCHIA, G. C.: The spleen and basal metabolism, 485
Periarterial sympathectomy, 59, 98, 449, 566
Pericarditis, acute, surgical treatment of, 416
Perineal prostatectomy, 415
Peripheral forms of epidemic encephalitis, 2
Peritoneal cavity, perforation of peptic ulcer into, 61
Peritonitis, tuberculous, in children, 179
Peritonsillar abscess, treatment of, 588
PERMIN, G. E.: Sanocrysin in pulmonary tuberculosis, 37
PERNET, G.: Salicin in psoriasis, 268
PÉRON, N.: The etiology of osteitis deformans, 56
Peroneal atrophy, the inheritance of, 486
Peroral endoscopy, 526
PERTHES, G.: Surgical treatment of scoliosis, 60—Restoration of ruptured anterior crucial ligament, 564
Pertussis. *See* Whooping-cough
PETÉNYI, G.: Koplik's spots, 414
PETERSON, L.: Atophanyl in rheumatism, 544
PETRIDIS, P. A.: Acute post-partum uterine haemorrhage, 599
PETTIT, A.: Serum treatment of spirochaetosis icterohaemorrhagica and acute poliomyelitis, 422
Pharynx, rhino-scleroma of, 528
PHILIBERT, A.: Stages in the development of the tubercle bacillus, 176
PHILLIPS, E. W.: Treatment of hay fever, 293
Phosphorus in various diseases, 68
PIERI, G.: Periarterial sympathectomy, 59
PILOT, I.: Infections by fusiform bacilli and spirochaetes, 119
Pimpernel in intestinal affections, the use of, 294
PITTALUGA, G.: Visceral leishmaniasis in Spain, 412
Pituitary extract, posterior, 25—For the induction of labour, 430, 530
Pituitrin. *See* Pituitary
Pityriasis rubra, 194
PLACE, E. Clifford: Unilateral proptosis due to scurvy, 244
PLACE, E. H.: Erythema arthriticum epidemicum, 411
Placenta praevia, central, version in, 44
PLAGEMANN, H.: Surgical treatment of scoliosis, 60
Plantar lines in mental defectives, 166
"Pleural epilepsy," 383
Pleural fluids, cholesterin in, 139
Pleural fluids, tuberculous antibodies in, 88
Pleurisy in scarlet fever, 282
Pleurisy, significance of, 466
Plexiform neuromata. *See* Neuromata
Pneumonia, oxygen treatment in, 394
Pneumothorax and pulmonary abscess in pertussis, 607

Pneumothorax in young children, 627
Pneumothorax, artificial, the use of oil in, 239—In children, 386—Basal metabolism in, 406—Production of antibodies by, 603
POINCLOUX, P.: The cause of acute polymorphic erythema, 641
POIRIER: Syphilitic reinfection in tabes, 583
Poisoning, benzol, chronic, fatal maxillary necrosis in, 446
Poisoning following the oral administration of bismuth subnitrate, 645
Poisoning, carbon monoxide, 516
Poisoning, potassium chlorate, blood transfusion in, 188
Poliomyelitis and measles, 338
Poliomyelitis, acute, serum treatment of, 422
POLLART, R.: Tubal insufflation in sterility, 173
POLLITZER, H.: Therapeutic uses of peptone, 14
Polycythaemia, sodium bicarbonate in, 295
Polyneuritis following wound diphtheria, 91
Polypi of the septum. *See* Polypus, nasal
Polyposis, colonic, 519
Polypus, nasal, structure of, 225—Pathogenesis of, 373
POMEROY, L. A.: Acute typhoid cholecystitis forty-one years after typhoid fever, 184
PONDMAN, A.: Vaccine treatment of whooping-cough, 40
Popliteal aneurysms, bilateral, 584
PORAK, R.: A test for metabolic variations 513
PORTMANN, F. W.: Bismuth hydroxide in syphilis, 71
Post-encephalitic syndrome, narcolepsy as a, 647
Post-encephalitic tic of the diaphragm, 235
Post-encephalitic tremor, the effect of tobacco in, 191
Post-operative vomiting, insulin-glucose treatment of, 546
Potassium chlorate poisoning, blood transfusion in, 188
POTTER, Claudia: Insulin-glucose treatment of post-operative vomiting, 546
Pott's disease in adults, treatment of, 472
POWERS, G. F.: Tetany and convulsions in whooping-cough, 54
POYNDER, E. G. T.: Cholesterol content of the cerebro-spinal fluid in mental disease, 533
Pre-eclamptic state, diet in the, 638
Pregnancy: In apparent absence of adnexa, 109—And pernicious anaemia, 434—And appendicitis, 344—Basal metabolism during, 510—Cornual, 134—Extrauterine, unusual varieties of, 636—Fibroids removed during, 196—In chronic leukaemia, 135—Molar, and hysterectomy, 305—protein shock, and hepatic colic, 483—Complicated by pyelitis, 245—And pulmonary tuberculosis, 431—Pernicious vomiting of, 79 (*See also* Hyperemesis gravidarum)—Radiography in, value of, 272. *See also* Gestation
Pregnancy diseases, van den Bergh's test in, 452
Pregnancy glycosuria, insulin and, 169
Presentations, persistent occipito-posterior, forceps delivery in, 328
PRIBAM, E.: The virulence of vaginal organisms, 197
PRICE-JONES, C.: The influence of fatigue on infection, 226
PRITCHARD, S.: Iodized oil in bronchial affections, 594
Proptosis, unilateral, due to scurvy, 244
Prostate, enlarged, *x*-ray treatment of, 573
Prostate, metastatic infections of with staphylococci, 389
Prostatectomy, 520—Perineal, 415—Sequels of, 207
Prostatitis, non-venereal, 290
Protein content of toxin-antitoxin, 536
Protein diet, high, and renal function, 84
Protein sensitivity, 334
Protein shock, pregnancy, and hepatic colic, 483
Protein therapy, in diabetes mellitus, 159—In syphilis, 189, 262—In eye infections, 475
Proteins, foreign, and asthma, 1
Pruritus, 596
Pruritus, senile, treated by sodium silicate, 393
Pseudo-neoplastic tuberculosis of the body of the uterus, 529
Psoriasis, the etiology of, 267—Salicin in, 268—Traumatic, after neosalvarsan, 598
Pubiotomy, dangers of, 329
Puerperal fever, treatment of, 403
Puerperal sepsis, 246
Pulsating veins in cardiac failure, 53
Pulse irregularity in epidemic encephalitis, 204
Pupils in somatic and visceral disorders, 477
Purpura haemorrhagica of the bladder, 31
Pustule, malignant, treatment of, 260
Pyaemia, ligature of the jugular vein in, 183
Pyelitis: In the infant, 131—Complicating pregnancy, 245

Q.

Quinine, effects of on the blood sugar, 112

R.

Rabies and herpes virus, the action of mixtures of, 202
Rabies virus, path of in the nervous system, 308
RACKEMANN, F. M.: Fatal asthma, 514
Radial nerve. *See* Nerve
Radiological diagnosis of gastric syphilis, 349
Radiographic diagnosis of cervical spinal caries, 219
Radiography: Of the gall bladder, 216—Of the lungs, 218
Radiography in pregnancy, value of, 272
Radiological diagnosis of pulmonary tuberculosis, 571
Radiological treatment of inoperable carcinoma of the breast, 397
Radium: In epitheliomata of the tongue, 73—In tumours of the nasopharynx, 421
Radius, fractures of the head and neck of, 419
RADOVICI, A.: A diagnostic sign in facial paralysis, 608
Rats, Vienna, spirochaetal infections in, 175
RAVENEL, S. F.: Convalescents' serum as a protection against varicella, 277
Rays, infra-red, therapeutic use of, 160
REALE, M.: Basal metabolism in pulmonary tuberculosis, 250
REBOUL, C.: The paraplegic forms of epidemic encephalitis, 489
RECASSENS, S.: Treatment of leucorrhoea, 247
Recklinghausen's disease, anomalous forms of, 228—Etiology of, 454
Rectal diverticula, 185
Rectal operations, anaesthesia in, 105
Rectum, prolapse of in the male, 651
Red corpuscles. *See* Blood corpuscles
REDLICH, F.: Duration of infectivity in measles, 444
REENSTIERNA, J.: Experimental transmission of leprosy, 273
REGAUD, Cl.: Radium in epitheliomata of the tongue, 73
REICHE: Lumbar puncture in meningitis, 231
REINHOLD: Polyneuritis following wound diphtheria, 91
Relapsing fever, 284
REMLINGER, P.: The action of mixtures of rabies and herpes virus, 202—Inoculation of herpes febrilis, 333
REMOND, A.: Vaccine treatment in epidemic encephalitis, 127
Renal diseases, the phenolsulphonephthalein test in, 461
Renal function and high protein diets, 84
Renal tuberculosis. *See* Tuberculosis
RENARD, C.: Anaerobic bacteria in appendicitis, 640
RENAUD, M.: The development of endocarditis, 29—The effect of sodium salts on blood pressure, 380
RESNIK, W. H.: Poisoning following the oral administration of bismuth subnitrate, 645
Respiratory disease, chronic, stovarsol in, 296
Reticulation in the red corpuscles, the significance of, 581
Retinal haemorrhage synchronous with onset of menstrual period, 503
REYNOLDS, F. E.: Leptomeningitis due to nasal furuncle, 326
REZZESI, F.: Interaction of tuberculosis and cancer, 532
RHEA, L. J.: Rheumatic fever and chorea in children, 203
Rheumatic aortitis, 538
Rheumatic fever and chorea in children, 203
Rheumatism, atophanyl in, 544
Rhinitis, atrophic, and chronic nasal diphtheria, 147
Rhino-scleroma of the pharynx, 528
RHODES, G. B.: Treatment of surgical tuberculosis, 208
RIBADEAU-DUMAS, L.: The treatment of infantile bronchopneumonia, 524
RIBOLLA, R.: Sea-sickness, 443
RICCIARDI, L.: The cuti-reaction and vaccination, 580
Rickets, prevention of by irradiated cholesterol, 378
RIECK, A.: Pararectal incision in difficult labour, 600
RIENHOFF, W. F.: The action of iodine in exophthalmic goitre, 48
RIESS, P.: Recurrent peptic ulcer, 154—Ligature of the jugular vein in pyaemia, 183
RIGGS, C. E.: Acriflavine in epidemic encephalitis, 212—Calcium lactate in migraine, 371
RIGHETTI, Ethel: De-etherization with carbon dioxide, 550
Ringworm of the scalp in the adult, 457
RIVES, J. D.: Prolapse of rectum in the male, 651
ROCHER, H. L.: Hernia of the ovary in infants, 9—Early operation for club-foot, 495
ROCKWELL, G. E.: Effect of carbon dioxide on the growth of the tubercle bacillus, 274
RODET, A.: Serum treatment of typhoid fever, 39
RODGER, T. Ritchie: Tracheotomy in tuberculous laryngitis, 41
ROGATZ, J. L.: Insulin in infantile nutrition, 496
ROGERS, J.: The acute post-operative toxaemia of hyperthyroidism, 587
ROGERS, W. A.: Tuberculosis of the sacro-iliac joint, 286
ROLLESTON, J. D.: Measles complicated by gangrene of the legs, 558
ROMANO, N.: Lipiodol in skiagraphy and treatment, 399
ROMEO, P.: Insufflation of the Fallopian tubes, 481
ROOT, H. F.: The clinical course of diabetes, 252
ROQUES, Alice: Bone dystrophy in carcinoma of the breast, 391
ROSCOE, Margaret H.: The antirachitic value of fresh spinach, 407
ROSENTHAL, R.: Absorption from the vagina, 222
ROTH, H.: Pancreatic cysts, 35
ROTHMANN, H.: Absorption of atophan through the skin, 498
ROUBIER, C.: Mediastino-pulmonary lymphosarcoma, 356
ROUBITSCHEK, R.: Insulin and pregnancy glycosuria, 169
ROUFFART-THIRIAR: Conservation of menstruation after hysterectomy, 172
ROWE, A. H.: Bronchial asthma in children and young adults, 359
ROWLAND, J. M. H.: Full-term ectopic gestation, 167
RUDAUX: Pregnancy in apparent absence of adnexa, 109
RUDOLF, R. D.: High blood pressure, 89
Ruge-Philipp test for virulence of vaginal organisms, 197
RUSSELL, J.: Cholesterol content of the cerebro-spinal fluid in mental diseases, 533

S.

SABOURAUD, R.: Attenuated forms of acne varioliformis, 265
SABRAZÈS: Tumours caused by oil injections, 616
Sacral tumours. *See* Tumour
Sacro-iliac joint, tuberculosis of, 286
Salicin in psoriasis, 268
Salivary gland, progressive atrophy of the, 93
SALOMON, M.: Antibodies in tuberculous pleural fluids, 88
SALOMON, S.: Exanthema subitum, 229
SALOMONE, M.: Treatment of malignant pustule, 260
Salpingitis, mural, 404
Salts, metal, in the treatment of pulmonary tuberculosis, 211
SALVO, C.: Tertian malaria with a long latent period, 253
SANFILIPPO, E.: Immunization against *B. melitensis*, 201
Sanocrysin, in pulmonary tuberculosis, 37, 38, 423, 624—German substitutes for, 162—Eruptions due to, 609
SANSUM, W. D.: Dieting in diabetes, 313
SANTANGELO, N.: Basal metabolism in artificial pneumothorax, 406—The prognostic value of lymphocytosis in the sputum of tuberculous patients, 662
Sarcoma of ovary, spontaneous rupture of, 78
SARF, J.: Complete post-partum uterine inversion, 432
SARGNON: Radium therapy in tumours of the nasopharynx, 421
SARMIENTO, S. A.: Uretero-pyelography, 72
SARTORY, A.: Treatment of senile pruritus by sodium silicate, 393
SCAL, J. C.: Abscess of the larynx, 448
Scalp, gangrene of, due to hydrogen peroxide, 392
Scapula, congenital displacement of, 342
Scarlatinella, or the "fourth disease," 487
Scarlet fever. *See* Fever
SCHEFFER: Treatment of senile pruritus by sodium silicate, 393
SCHFDROWITZKY, A.: Intravenous administration of digitalin, 102
Schick test and diphtheria prophylactic combined, 413
SCHLAPP, W.: Posterior pituitary extract, 25
SCHLESINGER, H.: Intermittent joint effusion, 232
SCHMITE: Treatment of Hodgkin's disease, 12
SCHOCKAERT, R.: Removal of fibroids during pregnancy, 196
SCHROCK, R. D.: Congenital displacement of the scapula, 341
SCHUERMANS: Sodium bicarbonate in polycythaemia, 295
SCHUMANN, E. A.: Puerperal sepsis, 246
SCHWARTZ, A.: Unusual varieties of extrauterine pregnancy, 636
SCHWARTZ, A. B.: Nutritional keratomalacia, 290
SCHWARZ, E.: Omental strangulation, 150—Total gastrectomy, 518
Scoliosis, surgical treatment of, 60
Scurvy, unilateral proptosis due to, 244
Sea-sickness, 254, 443
SÉDALLIAN, P.: Insulin in diabetic tuberculosis, 569
Sedimentation rate of red blood cells, 556
SELMAN, J. J.: Liver function tests, 557
Semilunar cartilage, displacements of, 648
SEMPÉ: The presence of a transmissible lytic agent in water, 249
SENDRAIL: Basal metabolism during pregnancy, 510
Septal necrosis causing ventricular bradyrhythmia, 582
Septum, polypus of. *See* Polypus, nasal
Serological classification of the haemolytic streptococci, 137
Serum administration followed by anaphylaxis 559
Serum of convalescents as a protection against varicella, 277
Serum treatment: Of typhoid fever, 39—Followed by musculo-spiral paralysis, 272—Of measles, 281, 465, 537—Of spirochaetosis icterohaemorrhagica and acute poliomyelitis, 422
Serums, refined therapeutic, 214
SHAW, W.: Evolution of the Graafian follicle and corpus luteum, 353

SHEFFIELD, H. B.: Infant feeding, 425
SHELMIRE, B.: Thrush infections of the skin, 192
SHEN, J. K.: Acute typhoid cholecystitis forty-one years after typhoid fever, 184
SHERWIN, C. P.: Chemical changes in the intestine, 174
SHIBLEY, G. S.: Bacteriology of the common cold, 511
SHIMODA, M.: Etiology of dementia praecox, 165
SHORNEY, H. F.: Protein therapy in eye infections, 476
Shoulder, the treatment of recurrent dislocations of, 258
SHUNKER, C. P. V.: Intravenous iodine in influenza, 100
SIEDAMGROTZKY: The gold treatment of surgical tuberculosis, 162
Silver nitrate causing inflammation of the cornea, 243
SIMONNET, H.: The prevention of rickets by irradiated cholesterol, 379
SIMONS, S.: Nephrolithiasis in children, 628
SINGER, G.: Protein therapy in diabetes mellitus, 159
Sinus, lateral, diagnosis of infection of, 340
Skiagraphy and treatment, lipiodol in, 398, 399, 400
Skin, cancer of, 585
Skin, thrush infections of, 192
Skin diseases, infectious, treatment of, 597
Skin diseases, insulin in, 474
SLYE, Maud: Heredity and cancer, 464
SMITH-PETERSEN, M. N.: Tuberculosis of the sacro-iliac joint, 286
SNOKE, P. O.: Typhoid abscess of the breast, 590
Sodium bicarbonate in polycythaemia, 295
Sodium bromide in treatment of hyperchlorhydria, 367
Sodium bromide solutions producing vesical lesions, 574
Sodium salts, effect of on blood pressure, 380, 381
Sodium silicate in treatment of senile pruritus, 393
Sodium sulphocyanate in hyperpiesia, 70
SOÏMARU, A.: Adenoma of the cervix uteri, 658
SOLMS, E.: Treatment of severe uterine prolapse 269
Somatic disorders, the pupils in, 477
SORRELL, E.: Radiographic diagnosis of cervical spinal caries, 219—Tuberculous disease of the wrist in children, 428
SOUTHBY, R.: Acute nephritis in children, 427
Spain, visceral leishmaniasis in, 412
Spasmophilia, 408, 409
SPÄT, W.: Antityphoid inoculation, 468
SPILLER, W. G.: Narcolepsy as a post-encephalitic syndrome, 647
Spinach, fresh, antirachitic value of, 407
Spinal anaesthesia. *See* Anaesthesia
Spinal caries, cervical, radiographic diagnosis of, 219
Spirochaetal infections in Vienna rats, 175
Spirochaete of tuberculous haemoptysis, 578
Spirochaetes and fusiform bacilli, infections by, 119
Spirochaetosis icterohaemorrhagica, serum treatment of, 422—And paratyphoid bacillaemia, 561. *See also* Jaundice
Spleen and basal metabolism, 485
Splenic abscess. *See* Abscess
Splenomegaly of the Gaucher and Niemann types, 311
Spray, cod-liver oil, in laryngeal and tracheal tuberculosis, 369
SPROGIS, G.: Dupuytren's contraction, 256
Sputum of tuberculous patients, the prognostic value of lymphocytosis in the, 662
SPYROPOULOS, N.: Vaccine treatment of typhoid fever in children, 475
STANGANELLI, P.: Hypogenital ascites, 227
STANLEY, L. L.: Treatment of acne by testicular implantations, 266
STANTON, B. L.: Acute nephritis in children, 427
STARLINGER, F.: The subsequent history of benign mammary tumours, 257
STARR, F. N. G.: Insulin in surgery, 320
STEFFEN, W. C. A.: Pneumothorax and pulmonary abscess in pertussis, 607
Stenosis, parabiliary, 420
Stenson's duct, dilatation of, 152
Sterility, tubal insufflation in, 173
Sterility in women, treatment of, 375
Sternotomy, median, in mediastinal tumours, 539
STEVENS, G. W.: Callus formation and restoration of function, 23
STEWART, C. A.: Anaphylaxis following administration of serum, 559
STOELTZNER, W.: Spasmophilia, 409
STOKES, J. H.: Administration of arsphenamine, 501
STOLYGVO, N.: Differentiation of the streptococcus group, 462
Stomach, cancer of. *See* Cancer
Stomach resection, sequels of, 469, 470
Stomatitis, ulcerating, stovarsol in, 215
STOUT, A. P.: Gaucher's disease, 540
Stovarsol in Vincent's angina and ulcerating stomatitis, 215—In chronic respiratory disease, 296—In congenital syphilis, 322
STOWE, W. P.: Diagnostic value of the cerebrospinal fluid sugar content, 307
Stramonium in the treatment of Parkinsonism, 346
STRASZYNSKI, A.: Ichthyol in gonorrhoea, 13
Streptococci, haemolytic, serological classification of, 137
Streptococcus group, differentiation of, 462
STRICKER, P.: Acute hypotension of cerebrospinal fluid, 64
STROMINGER, L.: Metastatic infections of the prostrate with staphylococci, 389
STRONG, L. W.: Lymphangioma of the Fallopian tubes, 221
STULZ, E.: Acute hypotension of cerebro-spinal fluid, 64
STURM, E.: Pulmonary malignancy following tar applications to the skin, 87
Subperiosteal fractures. *See* Fractures
Subphrenic abscess, 364
Sugar, blood, effects of quinine on, 112
Sugar treatment of epilepsy, 15—Of acute infections, 67
Sugar in urine, a mycological test for, 440
Sulpharsphenamine intravenously in syphilis, 424
Suprarenal insufficiency, insulin in, 452
Surgery, insulin in, 320, 471
Surgical operations. *See* Operations
SURMONT, J.: Intravenous administration of digitalin, 102
SUSANI, O.: Extraction of needles and fish-hooks, 620
SUTTON, L. E., jun.: Erythema arthriticum epidemicum, 411
SUZOR, R. A.: Vesicular mole and chorion-epithelioma, 506
SYME, W. S.: Chordoma of the cervical vertebrae, 656
Sympathectomy, results of in angina pectoris, 123—Lumbar pain treated by, 259
Sympathectomy, cervical, arterial pressure after, 388
Sympathectomy, periarterial, 59, 98, 449, 566—In surgical tuberculosis, 566
SYMS, P.: Perineal prostatectomy, 415
Synergy in anaesthesia, 106
Synovitis of the knee-joint, chronic non-specific, 589
Syphilis: Bismuth hydroxide in, 71—Of the cervix, primary, 602 — Gastric, radiological diagnosis of, 349—Of the joints, congenital, 118—Microscopical precipitation test for, 660—Protein therapy in, 189, 262—Sulpharsphenamine intravenously in, 424—Treatment of, 103
Syphilis, congenital: Progressive muscular dystrophy in, 57—Of the joints, 118—Diagnosis of, 182—The Wassermann reaction in, 275—The effect of early treatment of in children, 298—The past history in late manifestations of, 315—Stovarsol and tréparsol in, 322—The treatment of latent, 323
Syphilitic aortitis, incidence of, 363
Syphilitic reinfection in tabes, 583

T.

Tabes, arthropathy as an initial symptom of, 230—Syphilitic reinfection in, 583
TAKAKI, I.: Spirochaetal infections in Vienna rats, 175
TANNENBAUM, N. E.: *X* rays in carcinoma of the breast, 351
Tannic acid as an intestinal astringent, 297
TANT: Boric glycerin in post-operative urinary retention, 126
TAPIE, J.: Splenic abscess in typhoid fever, 447
Tar applications to the skin followed by pulmonary malignancy, 87
TARDIEU, A.: Treatment of pulmonary gangrene, 157
TAYLOR, F. E.: A mycological test for sugar in urine, 440
TEMESVÁRY, N.: Thymus extract in obstetric practice, 271
TENBROECK, C.: Immunization by tetanus bacilli in the digestive tract, 579
Tetanus bacilli in the digestive tract, immunization by, 579
Testicular implantations in the treatment of acne, 266
Testis, ectopia, 10
Tetany and convulsions in whooping-cough, 54
THEARLE, W. H.: Extrapleural thoracoplasty in pulmonary tuberculosis, 8
Therapeutic serums. *See* Serums
THIBIERGE, G.: Pruritus, 595
THIERENS, J. P.: Radiological treatment of inoperable carcinoma of the breast, 397
THOLEN, M. H. G.: Induction of labour by pituitrin, 430
Thoracoplasty, extrapleural, in pulmonary tuberculosis, 8
Thrush infections of the skin, 192
Thymus extract in obstetric practice, 271
Thyroid tumours, ectopic, in the neck, 186
Tibia, abscess of. *See* Abscess
Tic of the diaphragm, post-encephalitic, 235
TISDALL, F. F.: The metabolism in marasmic infants, 309
Tissue cultures *in vitro*, action of ultra-violet light on, 177
Tobacco, effect of in post-encephalitic tremor, 191
TOBEY, G. L.: Diagnosis of lateral sinus infection, 340
TONEFF, E.: Colloidal iodine in tuberculosis of the female genital organs, 499
Tongue, black, 385
Tongue, epithelioma of. *See* Epithelioma
Tonsillectomy followed by diphtheria, 337
Toxaemia, hepatic activity in, 111
Toxin-antitoxin, the protein content of, 536—Harmlessness of injections of, 592
Tracheotomy in tuberculous laryngitis, 41
TRAGANT, J.: Symmetrical dysmenorrhoeic dermatitis, 456
Tremor, post-encephalitic, effect of tobacco in, 191
Tréparsol in congenital syphilis, 329
Trigeminal lesions in mastoiditis, 325
Triphal. *See* Gold treatment of surgical tuberculosis
TRONCONI, D.: Measles and poliomyelitis, 338
TRONCOSO, M. U.: Charting the visual field, 632
TROPEA-MANDALARI, U.: Prolapse of the ovary, 22
Tryparsamide in neuro-syphilis, 451
Tubal insufflation in sterility, 173
Tubercle bacillus, stages in the development of, 176—The effect of carbon dioxide on the growth of, 274—Filterable forms of, in apparently normal organs, 358—In the faeces, 382—Filterable forms of, 555
Tuberculin, treatment of asthma by, 69—Chemical nature of, 251
Tuberculosis, apical, diagnosis of early, 92
Tuberculosis: Blood pressure in, 27, 28—And cancer, interaction of, 532—Of the caecum, 562—Diabetic insulin in, 569—Of the female genital organs, colloidal iodine in, 499—Immunity to, acquired, 52—Incidence of, 146—And measles, 361—And pregnancy, 431—Prophylaxis in, 206, 335—Of the sacro-iliac joint, 286—Sanocrysin in (*see* Tuberculosis, pulmonary)
Tuberculosis, glandular, *x*-ray treatment of, 401
Tuberculosis, hilum, 517
Tuberculosis, intestinal, *x* rays in the diagnosis of, 350
Tuberculosis, laryngeal, cod-liver oil spray in, 369—*X*-ray treatment of, 572
Tuberculosis, pseudo-neoplastic, of the body of the uterus, 529
Tuberculosis, pulmonary: Basal metabolism in, 250—Extrapleural thoracoplasty in, 8—Initial site of, 606—Metal salts in treatment of, 211—Pathology of terminal gastritis in, 49—And pregnancy, 431—Radiological diagnosis of, 571—Sanocrysin in, 37, 38, 423, 624—Following surgical operations, 535
Tuberculosis, renal, in childhood, 129—Nephrectomy for, 418
Tuberculosis, surgical: Treatment of, 208—Gold treatment of, 162—Etiology of, 341—Periarterial sympathectomy in, 566
Tuberculosis, tracheal, cod-liver oil spray in, 369
Tuberculous disease of the wrist in children, 428
Tuberculous filtrates, infectivity of, 199
Tuberculous haemoptysis, the spirochaete of, 578
Tuberculous laryngitis, tracheotomy in, 41
Tuberculous patients, the prognostic value of lymphocytosis in the sputum of, 662
Tuberculous peritonitis in children, 179
Tuberculous pleural fluids, antibodies in, 88
Tumour of auditory nerve, 654
Tumour of carotid body, 122
Tumour, mediastinal, median sternotomy in, 539
Tumour, pulsating sacral, 120
Tumours, benign mammary, the subsequent history of, 257
Tumours of brain in children, 130
Tumours of the nasopharynx, radium therapy in, 421
Tumours caused by oil injections, 616
Tumours, lymphoid, of the nasopharynx, 655
Tumours of ovary and endometrial hypertrophy, 47
Tumours, temporal, ocular signs of, 18
Tumours, ectopic thyroid, in the neck, 186
TURNER, A. Logan: Leptomeningitis due to nasal furuncle, 326
TURPIN, R.: Prophylaxis in tuberculosis, 206
TURQUETY, R.: Subcutaneous injection of milk in infants, 187
Typhoid abscess of the breast, 590
Typhoid bacillus. *See* Bacillus
Typhoid cholecystitis, acute, forty-one years after typhoid fever, 184
Typhoid fever. *See* Fever, enteric
Typhoid infections, atypical, 614
Typhoid vaccinations, the reactions of, 534

U.

UDAONDO, C. B.: Basal metabolism in cancer of the stomach, 26
Ulcer, gastric, dietetic treatment of, 161
Ulcer, peptic, perforation of into peritoneal cavity, 61—Recurrent, 154
Ulcer, varicose, treatment of, 288
Ulceration, trophic, following lethargic encephalitis, 362
Ulcers of the leg, diagnosis of, 434
Ultra-violet light, action of on tissue cultures *in vitro*, 177—In infantile asthma, 321—And the alkali reserve of the blood, 437
Urachus, cysts of the, 287
URBAIN, A.: Relation between herpes zoster and varicella, 224
Urea in cardiac oedema, 11
Uretero-pyelography, 72
Urethritis, gonorrhoeal: Prostatic massage in, 213—Treatment of posterior, 240
Urinary antiseptic, hexyl resorcinol as an, 101
Urinary retention, post-operative, boric glycerin in, 126

Urinary sequels of gynaecological operations, late, 352
Urinary tract in women, diagnosis of disease of, 659
Urine, sugar in, mycological test for, 440
Urology, spinal anaesthesia in, 373
Urotropine causing vesical lesions, 650
USAMI, G.: Resection of the lumbo-sacral sympathetic in impending gangrene of the leg, 339
Uterine haemorrhage: Control of, 19—Functional, 552—Acute post-partum, 599
Uterine inversion, complete post-partum, 432
Uterine prolapse, severe, treatment of, 269
Uterus, myomatous, torsion of, 402
Uterus: Perforated during curetting, 136—Retroposition of the, 330 — Retroversion of the gravid, 458—Suture of after Caesarean section, 459
Uterus, pseudo-neoplastic tuberculosis of the body of the, 529

V.

Vaccination against anaerobic infections, 331
Vaccination and the cuti-reactions, 580
Vaccine treatment: In epidemic encephalitis, 127—Of chronic gonorrhoea, 568—Local, of cuancroid, 324—Of typhoid fever, 263, 475—Of whooping-cough, 40, 343, 344
Vagina, absorption from the, 82, 222
Vagina, artificial, formation of an, 432
Vaginal hernia. *See* Hernia
Vaginal organisms, the virulence of, 197
VALTIS, J.: Antibodies in tuberculous pleural fluids, 88—Filterable forms of tubercle bacilli in apparently normal organs, 358
Van den Bergh's test in pregnancy diseases, 482
VAN DER HOOG, P. H.: Traumatic psoriasis after neosalvarsan, 598
VAN DONGEN, J. A.: Elephantiasis vulvae, 531
VAN PUTTE, P. J.: Treatment of gonorrhoea in women by diathermy, 248
VANVERTS, J.: Hydatidiform mole, 76—Fibroma of the cervix, 577
VAN WYCK, H. B.: Treatment of hyperemesis gravidarum, 306—Diet in the pre-eclamptic state, 638
Varicella, convalescents' serum as a protection against, 277
Varicella and herpes zoster, relation between, 224
Varicose ulcer, treatment of, 288
Varicose veins of the female pelvis, 270
VAS, J.: Pathogenesis and treatment of mongolism, 478
VAUCEL, M.: Intravenous chemotherapy in gonorrhoea, 593
VEBER, T.: Infectivity of tuberculous filtrates, 199—Production of antibodies by artificial pneumothorax, 603
Vein, jugular, ligature of in pyaemia, 183
Veins, pulsating, in cardiac failure, 53
Veins, varicose, of the female pelvis, 270
VELÁZQUEZ, B. L.: Administration of adrenaline, 621
VELO, C. A.: Congenital dislocation of the hip, 151
Ventricular bradyrhythmia due to septal necrosis, 582
VERCESI, C.: Surgical treatment of contracted pelvis, 170
VERDINA, C.: Tubercle bacilli in the faeces, 382
VERDON, W.: Epigastric distress, 312
VERHOEFF, F. H.: Metastatic intraocular mycosis, 631
Vertebrae, cervical, fracture dislocation of, 493—Chordoma of, 656
Vesical lesions produced by sodium bromide solutions, 574
Vesical lesions due to urotropine, 650
Vesicular mole and chorion-epithelioma, 506
VIALARD: Meningococcal ependymitis, 283
VIANA, G.: The value of artificial heliotherapy, 370
VILLARET, M.: Blood pressure in tuberculosis, 28
VINCENTINI, F.: Intravesical pressure, 280
Vincent's angina. *See* Angina
Visceral disorders, the pupils in, 477
VISHER, J. W.: Eczema and focal infections, 193
Visual field, charting the, 632
Vitellase (coagulates egg-yolk), 484
VOLK, G.: The blood picture in the diagnosis of appendicitis, 390
Vomiting, post-operative, insulin-glucose treatment of, 546
Vomiting of pregnancy, pernicious. *See* Hyperemesis gravidarum
VON BERDE, K.: Gangrene of scalp due to hydrogen peroxide, 392
VOORHOEVE, N.: *X*-ray treatment of malignant granuloma, 217
VOSS, J. A.: Stovarsol in Vincent's angina and ulcerating stomatitis, 215
Vulva, elephantiasis of, 531

W.

WADDINGTON, Hilda: Combined Schick test and diphtheria prophylactic, 413
WALDMAN, D. P.: Acute ascending myelitis following chicken-pox, 148
WALLGREN, A.: Acute aseptic meningitis, 515
WALTON, D. C.: Carbon monoxide poisoning, 516
WALZEL, P.: The subsequent history of benign mammary tumours, 257
WARREN, S.: The clinical course of diabetes, 252
WARREN, S. L.: Pulsating veins in cardiac failure, 53
Wassermann reaction in congenital syphilis, 275
WASSERMANN, S.: Cardiac asthma, 410
Water, the presence of a transmissible lytic agent in, 249
WEBER, F. Parkes: Paraplegia and Hodgkin's disease, 644
WEBSTER, J. H. D.: Radiological treatment of inoperable carcinoma of the breast, 397
WEIL, M. P.: Rheumatic aortitis, 538
WEILL-HALLÉ, B.: Prophylaxis in tuberculosis, 206
WEILL-SPIRE, R.: Treatment of varicose ulcer, 288
Weil's disease in Holland, 612
WEINBERG, M.: Vaccination against anaerobic infections, 331—Anaerobic bacteria in appendicitis, 640
WEISSENBACH, R. J.: Spirochaetosis icterohaemorrhagica and paratyphoid bacillaemia, 561
WESCOTT, V.: Conical cornea, 17
WESSELS, D. A.: Conservative treatment in gynaecology, 601
WETTERWALD, M.: The scar after cervical Caesarean section, 429
WEYGANDT, W.: The bromide treatment of epilepsy, 128
WHIPPLE, A. O.: Subphrenic abscess, 364
Whooping-cough: Vaccine treatment of, 40, 343, 344—Tetany and convulsions in, 54—Ether injections in, 66—Pneumothorax and pulmonary abscess in, 607
WHYTE, B.: Iodized oil in bronchial affections, 594
WIDAL, F.: Spirochaetosis icterohaemorrhagica and paratyphoid bacillaemia, 561
WILDER, R. M.: Surgery in diabetes, 542
WILLIAMS, J. T.: Pregnancy complicated by pyelitis, 245
WILLIAMS, T. H.: Spontaneous rupture of the oesophagus, 521
WILLIAMS, H. C.: Forceps delivery in persistent occipito-posterior presentations, 328
WILLNER, O.: Erythema arthriticum epidemicum, 411
WILMER, H. B.: The protein content of toxin-antitoxin, 536
WISE, F.: Anomalous forms of Recklinghausen's disease, 228
WITHERSPOON, M. G.: Carbon monoxide poisoning, 516
WŁADYCZKO, S.: Sugar treatment of epilepsy, 15
WOLBARST, A. L.: Prostatic massage in gonorrhoeal urethritis, 213
WOLF, W.: Chemical changes in the intestine, 174
WOLFF, E.: Ammonium tartrate in lime burns of the cornea, 500
WOLFF, F.: Vaccine treatment of chronic gonorrhoea, 568
WOLFSON, M.: Infectious muscular erosion, 563
WOOD, A.: Hexyl resorcinol as a urinary antiseptic, 101
WOLKE, E.: The effect of tobacco in post-encephalitic tremor, 191
Wound diphtheria. *See* Diphtheria
Wounds, dichloramine-T in the treatment of, 626
WRIGHT, C. S.: Protein therapy in syphilis, 189
Wrist mobility in diagnosis, 233
Wrist, tuberculous disease of in children, 428
WULFF, F.: The prophylaxis of measles, 465
WYNNE, H. M. N.: Hexyl resorcinol, 625

X.

X-ray treatment: Of local infections, 74—Of malignant granuloma, 217—Of glandular tuberculosis, 401—Of laryngeal tuberculosis, 572—Of enlarged prostate, 573
X rays in obstetrics, 171—Aplastic anaemia due to, 348—In the diagnosis of intestinal tuberculosis, 350—In carcinoma of the breast, 351

Y.

YATES, J. L.: Callus formation and restoration of function, 23
YOUNG, A. M.: A microscopical precipitation test for syphilis, 660
YOUNG, H. H.: Treatment of infectious skin diseases, 597

Z.

ZACKS, D.: Hilum tuberculosis, 517
ZANETTI, G.: Tumour of the auditory nerve, 654
ZANGEMEISTER: The etiology of eclampsia, 198
ZANOLI, R.: Congenital dislocation of the patella, 156 — Arthropathy as an initial symptom of tabes, 230
ZINGHER, A.: Diphtheria following tonsillectomy, 337
ZOELLER, C.: Relapsing cerebro-spinal fever, 181
ZUNINO, H.: Basal metabolism in cancer of the stomach, 26
ZWEIFEL: Prognosis in uterine cancer, 195

Printed and published by the British Medical Association, at their Office, Tavistock Square, in the Parish of St. Pancras, in the County of London.

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

1. Asthma and Foreign Proteins.

A. BESSEMANS (*Le Scalpel*, November 14th, 1925, p. 1157) reports a very chronic case of bronchitis and asthma cured finally by the simultaneous injection of a mixed autogenous vaccine, of tuberculin, and of a sensitizing substance from bed fluff, mainly of a woolly nature. He thinks that the sensitizing substance had penetrated the epithelial cells of the respiratory passages, favoured by the pre-existing acute bronchitis. He found that the patient could distinguish the tuberculin injection from the others by the feeling of relief afforded, but that this remedy by itself was inadequate. It became clear that the case was one of mixed infection on which a special form of allergic sensitization had been imposed. Intradermal inoculation defined the nature of this sensitization and indicated the appropriate treatment. Bessemans adds that the desensitizing treatment must be gradual and prolonged, with very small increases in the injections and careful avoidance of reactions.

2. Peripheral Forms of Epidemic Encephalitis.

L. BÉRIEL and A. DEVIC (*Presse Méd.*, October 31st, 1925, p. 1441) describe a form of disease in which the nerves and nerve roots are exclusively attacked; they believe it to have the same etiology as epidemic encephalitis. The symptoms include polyneuritis and flaccid paraplegia with abolition of reflexes. As a general rule the paralysis spreads to the abdomen, and eventually to the upper limbs, though there are cases in which only the lower limbs are involved. The sphincters are frequently affected, and in two cases the disease spread to the cranial nerves; in one case a facial and in the other a glosso-pharyngeal paralysis developed. Pain was rarely severe, but in some cases necessitated morphine. Sensation is usually affected. There is never a true anaesthesia; but hyperaesthesia and paraesthesia, particularly the latter, are common. There is an excess of albumin in the cerebro-spinal fluid. The patients generally make a complete recovery in one to five or six months. In only one case, still under observation, did the paralysis persist for as long as eight months, the pelvic girdle, the buttocks, and the abdominal parietes being involved. In its early stages the condition has to be distinguished from infantile paralysis, which is more dramatic in its onset and severe in its paralysis. If the polyneuritis takes five or six days to prostrate the patient the diagnosis is clear. But there are cases in which the onset is more rapid. For treatment the authors recommend the prevention of muscular contractures, the administration of strychnine, and the application of the continuous current.

3. Non-syphilitic Aortitis.

L. NEUMAN (*Journ. Amer. Med. Assoc.*, October 31st, 1925, p. 1361) states that both acute and chronic non-syphilitic aortitis are not rare conditions. Although it is generally agreed that aortitis can be of syphilitic origin, some have denied that it can be the result of any other infection. Neuman thinks that the predisposing causes of the non-syphilitic type are the irregular lymphatic supply to the aorta, the numerous lymph nodes lying along it, and their direct connexion with the large drainage spaces of the body. Another factor, according to Westenhöfer, is man's phylogeny and his assumption of the upright position. Neuman points out that the causative agent may be toxic or bacterial, and may be brought to the site of the disease by the blood circulating in the aorta or the vasa vasorum, or very occasionally by direct continuity from an adjacent infection. This may occur in the course of any infectious disease and in any conditions where there are foci of infection. Other associated factors seem to be high pressure work and play and other excesses. He states that the symptoms vary in intensity in different cases; pain is the most constant and is usually retrosternal, but it sometimes radiates to the arm. While the pain sometimes resembles that of angina pectoris it is more often described as a sense of fullness, pressure, or tightness; it frequently interferes with respiration, and the patient complains that the heart feels as though it were turning over. The pain is more noticeable in cold weather and especially when walking; it is often relieved by stopping for a few minutes. It must be distinguished from cardiac pain. Dyspnoea is often present and may be the predominant symptom; tachycardia is common but is seldom accompanied by any irregularity. The blood pressure is never high in uncomplicated cases. Fever is present in many cases; it is seldom high but is extremely irregular. Oedema of the extremities is rarely observed. In the 29 cases of aortitis which the author examined repeated Wassermann tests were performed to eliminate the possibility of syphilis. The prognosis in mild cases is good; none of his patients died and 90 per cent. improved considerably. Neuman recommends rest in bed for long periods, the removal of all foci of infection, and a careful regulation of the habits and exercise during convalescence. Overeating must be avoided and moderation observed in everything. He usually gave iodides in large doses over long periods, purely on empirical grounds.

4. Radial Nerve Paralysis.

H. DUFOUR and A. BLONDEL (*Bull. Soc. Méd. de Paris*, November 12th, 1925, p. 1380) report a case of typical and complete radial nerve paralysis with diminished reflexes, no trophic changes, and a negative Wassermann reaction. There were no other symptoms. The condition did not respond to treatment, and remained unchanged until six weeks later, when there occurred an acute arthritis of the shoulder on the same side, and in a few days the wrist became affected. Salicylates were given, with the result that the arthritis disappeared and the paralysis diminished gradually until at present only a slight weakness of the thenar muscles is left. It is suggested that the rheumatic diathesis may be concerned even in cases of neuritis of a single nerve, and that treatment by salicylates should therefore be tried.

5. Incipient Hypothyroidism.

W. H. HIGGINS (*Journ. Amer. Med. Assoc.*, October 3rd, 1925, p. 1015) deals with a group of cases of incipient hypothyroidism in which the metabolic rates were sufficiently near the border-line to make the diagnosis of hypothyroidism doubtful, unless other evidences were forthcoming, and records twenty-three cases where the basal metabolic readings were from −11 to −25. He describes a clinical syndrome which differs from that of true myxoedema, and comprises moderate dryness of the hair and skin, neuroses of various types, and vague pains. Obesity is relatively uncommon, and the weight is often below normal. Cases of incipient thyroid deficiency are found to occur, not uncommonly, near the menopause, and Higgins suggests that the condition is connected in some way with ovarian activity.

Surgery.

6. Diagnosis of Acute Pancreatitis.

R. R. CRANMER (*Minnesota Med.*, November, 1925, p. 675) states that during the last few years there has been a great increase in the number of reported cases of acute pancreatitis, but that a pre-operative diagnosis is rarely made, since there is no one definite pathognomonic sign or symptom. Moreover, this condition is most often seen in persons who have previously had severe abdominal disorders, and who at the time need immediate surgical intervention without waiting for a definite diagnosis. The author points out that of the five cases of acute pancreatitis which he reports one was diagnosed pre-operatively as perforating duodenal ulcer, one as stone in the common bile duct, and another as empyema of the gall bladder. He states that the onset of symptoms usually occurs soon after a heavy meal, and takes the form of a sudden acute pain and tenderness in the epigastrium, generally a little to the left of the mid-line. This is accompanied by continuous vomiting of food, bile, and mucus. The upper abdomen is slightly distended, resistance is not sharply defined, the pulse is weak, there is collapse, and sometimes cyanosis. After a few hours the epigastric swelling becomes definite, and jaundice may appear if there is obstruction of the ampulla of Vater due to gall stones, swelling of the duodenal mucosa, or other causes. The patient is usually constipated; later there is peritonitis, abdominal rigidity, marked distension of the abdomen, rapid and thready pulse, and the patient complains of intense thirst. Then follow rapidly delirium, coma, and death. If an abscess ruptures into the stomach or bowel, pancreatic detritus may appear in the vomit or stools. The urine may contain a small amount of sugar, while the blood sugar may remain normal. Acute pancreatitis has to be distinguished from perforated gastric or duodenal ulcer, perforated gall bladder, poisoning by irritants, acute intestinal obstruction, and stone in the common bile duct. There is no pathognomonic sign or

symptom of acute pancreatitis, but this possibility should always be remembered in all acute conditions of the upper abdomen in which the symptomatology does not definitely indicate one of the more common disorders of this part.

7. Partial Ligature of the Common Carotid.

H. H. KERR (*Surg., Gynecol. and Obstet.*, November, 1925, p. 565) describes an original method of incomplete occlusion of the common carotid artery in the treatment of pulsating exophthalmos; notes of three cases are given. An arteriovenous fistula between the internal carotid artery and the cavernous sinus may result from fracture of the base of the skull or direct violence; or it may arise spontaneously from the rupture of an aneurysm of the carotid, or an unruptured aneurysm of the ophthalmic artery within the orbit. The condition leads eventually to blindness of the affected eye with a bruit, which is most distressing to the patient. In order that the collateral circulation may not be restricted unduly a strip of fascia lata is passed, under local anaesthesia, round the artery below the bifurcation; by this means the artery can be gradually constricted until the pulsation in the eyeball ceases, and without producing signs of cerebral anaemia. The patient, being conscious, is able to help in judging the exact degree of constriction required; when this has been ascertained the fascial band is sutured and the wound closed, the lumen of the artery having been reduced usually about one-half. Temporary improvement resulted in all three cases, but as the symptoms showed signs of recurrence about three weeks later the carotid was completely tied just above the fascial band, with permanent benefit and without such signs of cerebral anaemia as were often encountered when the preliminary operation was not performed.

8. Extrapleural Thoracoplasty in Pulmonary Tuberculosis.

W. H. THEARLE (*Med. Journ. and Record*, October 7th, 1925, p. 399) records the result of sixty cases of extrapleural thoracoplasty for pulmonary tuberculosis. The frequent failure of sanatorium treatment to arrest the disease and the impracticability of pneumothorax in many cases owing to pleural adhesions are responsible for the recent recognition of this operation. The aim of the operation is to bring about the collapse of one lung mechanically by a diminution in size of half the thorax by a paravertebral resection of the upper eleven ribs, usually in two stages. The chest after the operation requires support by adhesive straps over gauze pads. The operation may be performed from below upwards or in the opposite direction; it produces immediate permanent collapse and the patient is spared prolonged medical treatment. A two-stage operation appears the best for most cases. Phrenicotomy as a preliminary measure tests the effect of additional work on the better lung. In sixty cases the disease was arrested in 30 per cent., improved in 25 per cent., and there was a mortality of 18 per cent. Thearle thinks that the operation is indicated in chronic fibrous disease with excavation, and also in recurrent haemorrhage. Five cases are reported in detail with radiograms and photographs of the patients after treatment.

9. Hernia of the Ovary in Infants.

H. L. ROCHER (*Journ. de Méd. de Bordeaux*, November 10th, 1925, p. 991) describes eight cases of infantile hernia of the ovary treated by himself and a colleague during the last six years, and mentions the importance of bearing such a possibility in mind in the case of an infant with a small protruding lump at the inguinal canal. It is, as a rule, painless and movable, but irreducible, and is accompanied by no gastro-intestinal symptoms. The usual diagnosis is a cyst in the canal of Nuck, the operative treatment for which is usually deferred until the child is older. If, however, the condition is hernia of the ovary an immediate operation is indicated, because the vitality of the organ is at stake, and also because strangulation is liable to occur. In three out of the eight cases cited it was necessary to remove the ovary and tube owing to pathological changes due to acute or gradual strangulation.

10. Ectopia Testis.

F. BERNHARD (*Zentralbl. f. Chir.*, November 14th, 1925, p. 2592) records a case of displacement of the left testis in a man aged 24. The organ was of normal size and lay on the dorsal surface of the penis at the junction of the upper and middle thirds. At the operation a small hernial sac at the left external ring was found and excised. Both layers of the tunica vaginalis were divided and the testis was placed in normal position in the scrotum. Bernhard found that the vaginal process had united with the transversalis fascia, thus diverting the testis from its normal course and preventing its descent into the scrotum.

Therapeutics.

11. Urea in Cardiac Oedema.

J. H. CRAWFORD and J. F. MCINTOSH (*Arch. Intern. Med.*, October 15th, 1925, p. 530) state that while it has been known for a long time that the administration of urea in large doses produces a considerable diuresis, little effort has been made until recently to utilize this drug for therapeutic purposes. They have therefore investigated its value in eight patients with advanced heart failure and considerable oedema. The treatment included rest in bed, salt-free diet, thorough digitalization, and restriction of fluid to a daily intake of 1,200 c.cm. Urea was given in a small quantity of water after meals in order to avoid gastric disturbance; in some cases it was administered in two doses of 15 grams a day, and in others in steadily increasing doses up to 60 grams a day. The authors found that there was an immediate rise in the urine output, which followed closely the curve of urea excretion, but that this increased output was not maintained unless the urea administration was continued. Blood urea estimations showed that the changes in the urine volume and urea excretion were dependent on the concentration of urea in the blood. The authors found no appreciable increase in the amount of chlorides excreted, and no evidence of kidney irritation, but where the latter was present previously it rapidly disappeared after the urea treatment had begun. In some cases there was slight intolerance to urea, as shown by loss of appetite, nausea, vomiting, and a feeling of weakness or lassitude; on discontinuing the administration these symptoms disappeared. Most of the patients complained of thirst and headache during the treatment, but these were never sufficiently severe to compel its suspension. In all their cases the authors found there was considerable improvement in the general condition, the patients felt better, and the oedema disappeared. They therefore conclude that urea is a useful drug in the treatment of cases of heart failure with oedema in which treatment of the cardiac condition has failed to remove the oedema or to maintain an adequate excretion of water.

12. Treatment of Hodgkin's Disease.

LORTAT-JACOB, SCHMITE, and LERASLE (*Bull. Soc. Méd. de Paris*, November 12th, 1925, p. 1394) report two cases of Hodgkin's disease both treated by *x* rays. In one the treatment was for a time successful. The patient's condition improved and all palpable glands disappeared. There was a fatal recurrence, however, later. The second patient did not do so well. It occurred to the authors that in *x*-ray therapy substances inimical to the growth of the lymphadenoma were being set free in the blood. They therefore injected serum from the blood of the first "convalescent" patient into the second, who was failing to react to treatment. This had a remarkable effect on the blood picture, the red cells rising from 3½ to 4½ million and the whites from 12,000 to 25,000. Serum injections were given daily, beginning with 1/4 c.cm. and rising to 1 c.cm., this dose being then continued for twelve days. A further course was given later. During the whole period *x*-ray treatment was given. All the symptoms, including boils which had been most intractable, cleared up, and the patient was discharged. The authors suggest that the serum augments but does not take the place of *x*-ray therapy.

13. Ichthyol in Gonorrhoea.

A. STRASZYNSKI (*Polska gazeta lekarska*, November 1st, 1925, p. 927) describes the treatment of 41 cases of venereal and skin diseases by intramuscular injections of a 2 per cent. solution of ammonium sulpho-ichthyolate in doses of 3 c.cm. every second or third day. The ichthyol should be diluted just before the injection. The author has obtained the best results in cases of gonorrhoeal epididymitis; in 17 out of 20 cases thus treated the pain ceased and the swelling was diminished after the first injection, while four or five injections were, as a rule, sufficient to enable the patient to be discharged well or to confine himself to local treatment. In a case of pyelitis with urethritis and epididymitis which was not due to the gonococcus the swelling had gone down after the third injection and the urine had cleared. On the other hand, no therapeutic benefit was observed in skin diseases treated by ichthyol, except in one case of furunculosis and two of psoriasis.

14. Therapeutic Uses of Peptone.

H. POLLITZER (*Wien. klin. Woch.*, November 5th, 1925, p. 1201) employs a sterile 5 per cent. solution in 1 c.cm. capsules, of either Merck's or Armour's peptone; Witte's preparation has been avoided because of its high histamine content. The basis of the therapeutic action of peptone is its constriction of the valves controlling the portal and pulmonary venous systems, thus tending to produce congestion, the reverse of what occurs

with the drug novasurol. The therapeutic value of peptone in bronchial asthma is explained as being due to shock effect on the sympathetic nervous system, and the pulmonary vessels and bronchial muscle fibres under its control. The action of peptone may be very pronounced; in an unselected case of lymphatic leukaemia an injection of peptone raised the weight 6½ lb. in three days. It is often rapidly effective in checking some forms of severe diarrhoea, haemoptysis, and asthma, the latter being probably its chief field of use at present. It is given by intramuscular injection. Pyrexia should never follow; if it does it indicates the existence of idiosyncrasy, failure of therapeutic action, or sepsis.

15. Sugar Treatment of Epilepsy.

S. WLADYCZKO (*Presse Méd.*, November 7th, 1925, p. 1475) noticed that in a district in Russia sugar shortage increased the incidence of epilepsy and aggravated already existing cases. Investigations of the blood sugar content of epileptics produced discordant results. One of the author's epileptic patients showed just before the attack only half the normal amount of blood sugar, and so Wladyczko determined to try the administration of sugar in such cases. He now recommends glucose in doses of 50 to 100 grams by the mouth, given in water, or else ordinary sugar, 200 grams, in either case once daily. This may be varied by giving sugary foods, such as jam or preserved fruit. The sugar cure should be combined with other medication, such as luminal or bromides, although in some cases sugar alone relieved all symptoms. The treatment is controlled by periodical examination of the blood and urine. The results were that in 18 cases the fits became less frequent and severe; in 5 cases the fits returned only once at intervals of four, five, or six months, whereas previously they had occurred every day in one patient, and in the others nearly once a week.

Ophthalmology.

16. Estimation of the Ocular Muscle Balance.

C. S. O'BRIEN (*Journ. Amer. Med. Assoc.*, October 24th, 1925, p. 1295) recommends prolonged monocular occlusion for the correct estimation of deficiency in the ocular muscle balance. He states that orthophoria is almost as rare as emmetropia, and that although the majority of heterophorias are of small degree, and are easily corrected by the average person without giving rise to symptoms, nevertheless where there is also present some other type of pathological change which affects the ocular muscles, or their innervation, or where the errors are large enough to require a constant spasm of the muscles in order to maintain binocular single vision, this test is necessary. The indications for the test are: (1) where the patient already has glasses which properly correct any refractive error, and yet continues to suffer from asthenopia; (2) where vision is distinct with one eye but becomes blurred when two are used; (3) where there is as much or more discomfort in distant vision as in accommodation; (4) when the patient shows pronounced symptoms of asthenopia after visiting a cinema or theatre; (5) where the symptoms are out of all proportion to the refractive error; (6) where headaches, vertigo, or vomiting are caused by riding in a swiftly moving vehicle. O'Brien has found that by this test he has been able to reveal high degrees of imperfect balance which were undetected by the ordinary methods. He considers this method to be analogous to that of estimating errors of refraction by using a mydriatic, since by prolonged monocular occlusion rest is given to the ocular muscles. When the test was originally devised by Marlow the period of occlusion recommended was about a week, but O'Brien had found that two or three hours suffice in the majority of cases.

17. Conical Cornea.

V. WESCOTT (*Amer. Journ. of Ophthalmol.*, October, 1925, p. 802), discussing the condition known as conical cornea, is inclined to attribute it to a developmental defect whereby the growth of the fibrous elements of the cornea is retarded; this retardation is most marked at the centre of the cornea, which is farthest removed from the blood supply. The fact that the disease usually appears just after puberty suggests, on the other hand, that it may be due to some metabolic change occurring at that time of life. While diagnosis of a well marked case is easy, Wescott thinks that many slight cases are probably overlooked. He has seen no good result produced by general medical treatment. The various operative measures, such as needling the lens, the formation of a slit-like pupil, paracentesis of the anterior chamber, trephining or cauterizing the cornea, and excising portions of the cornea with subsequent suturing, are mentioned. The author thinks that on the whole conservative measures are best, and that the prolonged use of miotics with a pressure bandage gives the best result in most cases. In very extreme cases operative treatment may possibly be justifiable, he adds, but the state of the other eye must be considered in this connexion. In most cases vision can be improved by lenses.

18. Ocular Signs of Temporal Tumours.

W. I. LILLIE (*Journ. Amer. Med. Assoc.*, November 7th, 1925, p. 1465) has investigated the ocular changes in 53 patients suffering from temporal lobe tumours. He distinguishes four types of changes: (1) changes in visual acuity; (2) changes in the optic discs; (3) changes in the visual field; and (4) oculo-motor changes. He found that out of 168 verified cerebral tumours 53 were of the temporal lobes, thus suggesting that these are more common than was previously believed. He states that except for the absence of visual hallucinations in these cases his findings closely agree with those published by Cushing in 1921. Oculo-motor changes were not common and occurred in only 13 of his cases, but all these changes, with the exception of convergence weakness, were present on the left side, whereas the tumours were about equally divided between the two sides. Bilateral choking of the discs was present in 45 cases and was higher on the contralateral side as often as on the homolateral. He considers that an ocular syndrome could be established for early temporal lobe tumours—namely, normal visual acuity, bilateral choked discs, and homonymous quadrant defects either for colour or form. These last he found present in 43 out of his 51 patients in whom he was able to chart the fields, and he believes them to be of great importance in the diagnosis of temporal lobe tumours, especially when associated with bilateral choked discs.

Obstetrics and Gynaecology.

19. Control of Uterine Haemorrhage.

W. S. NEWCOMET (*Journ. Amer. Med. Assoc.*, November 7th, 1925, p. 1459) recalls that the cells of the generative organs are more susceptible to *x* rays than any other cells in the body, and that radium and irradiation have been used for the control of uterine haemorrhage for the last ten to twenty years. While with radium there has been considerable success the scarring and skin changes resulting from the use of large doses of *x* rays have deterred most practitioners from recommending their general employment. Radium, however, requires careful preparation of the patient before its use; the exposure is somewhat long, and disturbing results have been observed. Newcomet therefore investigated the control of uterine haemorrhage without checking menstruation by means of smaller doses of *x* rays than had previously been used. His method was to cover the body of the patient completely with a leaded rubber sheet or thin lead plates, and to expose four areas over the anterior portion of the pelvis, each 2 inches square, for four minutes, at a 10-inch focal distance, to rays produced by a current of 4 milliamperes, with an 8-inch spark-gap, and a 3 mm. aluminium filter. Subsequent applications depended largely on the results obtained by the first. If necessary a second application to five areas on the back were given at the end of three weeks, using the same technique. If still further sittings were required cross-firing from the two sides was adopted after six to eight weeks. In very few cases was there any tanning of the skin, and the pubic hair was retained in every case. By this treatment he has had 45 successful results in 60 cases of uterine haemorrhage. In some it was possible to control the bleeding without stopping menstruation, but the author states that in women nearing the menopause this method is likely to lead to permanent cessation of menstruation. In some of the younger women the periods ceased temporarily but returned later.

20. Necrobiosis in Fibromyomata.

FORGET-URION (*La Gynécol.*, October, 1925, p. 579) discusses the complications introduced into pregnancy, labour, and the puerperium by the uterine fibroids, and states that, while the size of the tumour is the most common cause of difficulty, yet such other conditions as degeneration, sepsis, and gangrene should not be overlooked. He recalls the opinion of Pinard that fibromyomata arise as perversions of genital activity owing to there having been no pregnancy before the age of 25, and that pregnancy is the best prophylactic and curative treatment. Considering the problem of whether marriage should be recommended in such cases, the present author points out that small fibromyomata occurring in older primiparae do little more than lengthen labour and render it irregular, while large fibromyomata are relatively infrequent in these patients. He mentions briefly the well known

mechanical complications, such as torsion, and points out that necrobiosis due to interference with the blood supply of the tumour is a definite danger which deserves more consideration than is usual. The degenerative change usually starts near the centre of the fibroid owing to its vascular arrangement, and an aseptic fluid mass results; this may, however, become infected secondarily, and particularly after delivery. The most distinctive sign of this degenerative process is pain in the fibroid and tenderness on pressure, which persist in spite of rest and cold applications. General signs of toxic absorption become apparent later, but without pyrexia or with transient spells of fever only. For treatment myomectomy is indicated when possible, or hysterectomy if there are multiple necrosed fibroids. Other forms of degeneration are said to be rare; only one case of true gangrene seems to have been reported during pregnancy, but this condition is relatively more common after delivery.

21. Brow Presentation.

F. JESS (*Zentralbl. f. Gynäk.*, November 14th, 1925, p. 2609) cites various observers who have recently drawn attention to a mechanism of labour in brow presentations which differs from that usually described in that the antero-posterior diameter of the foetal head passes through the pelvis in the transverse or oblique rather than the conjugate diameter. He records two cases of brow presentation in which the long axis of the foetal head engaged in the transverse diameter of the pelvis. In the first case oblique forceps application led with great difficulty to delivery of the head with the sagittal suture in an oblique diameter. In the second case the child was born alive; the forceps application was made transversely, one blade grasping the malar region and face and the other the vertex and occiput. The passage was aided by traction, first to one side and then to the other. Jess remarks that, owing to the rarity of brow presentations and their late recognition in labour, trustworthy observations in a series of cases are obtainable only with great difficulty; the publication of observations by general practitioners is desirable. There is some theoretical and actual evidence that rotation of the sagittal suture into the antero-posterior pelvic diameter is normally absent or incomplete in brow presentation, and that the commonly accepted indications for the use of forceps or other operative treatment need reconsideration.

22. Prolapse of the Ovary.

U. TROPEA-MANDALARI (*Riv. d'Ostet. e Ginecol. Prat.*, November, 1925, p. 482) regards prolapse of the ovary within the pouch of Douglas as a malady having fairly characteristic signs and symptoms. More often acquired than congenital, its predisposing cause is to be found in abnormal length and extensibility of the utero-ovarian and suspensory ligaments. The immediate causative agencies are trauma, the puerperal state, uterine and vaginal prolapse, and retroposition of the uterus. The symptoms consist in (1) pain, which is more often acute than subacute, (2) menstrual disturbances, (3) dyspareunia, (4) pain in defaecation. A symptom which, if present, is characteristic, is participation of the mammary gland in the attacks of pain. Diagnosis from ectopic pregnancy is usually easy, but from appendicitis and inflammatory adnexal conditions it may be very difficult. Palpated in the pouch of Douglas, the prolapsed ovary is very tender and is rounded and hard; the tumour associated with salpingitis, on the contrary, appears very closely connected with the posterior wall of the uterus and is soft and elongated. A valuable diagnostic sign in ovarian prolapse is the ascent of the tumour from the pouch of Douglas when the patient is examined with the pelvis elevated. In treatment pessaries are of little avail. Removal of the ovary is rarely justifiable. The operative method recommended is that of Merletti, who sutures the infundibulo-pelvic ligament to the round ligament about 3 cm. from the uterine insertion of the latter.

Pathology.

23. Callus Formation and Restoration of Function.

J. L. YATES and G. W. STEVENS (*Annals of Surgery*, October, 1925, p. 617) point out that the formation of callus in the repair of a fractured bone is comparable with the healing processes in other tissues, and that the amount and strength of the callus will depend upon the movements of the bony fragments. In those animals and birds which survive fracture of a bone the function of the limb is in most cases completely restored, and this is due to the persistence of active movements limited only by pain. The authors further compare callus with atrophic bone, in that in both there is less than the normal amount of bone tissue within the outer shell, and therefore if the callus is subject to normal stresses there tend to be produced areas of more compact bone along the lines of these applied forces. If these stresses are present but not excessive the use of the limb is more rapidly regained than if immobilization is employed. Should the movements be excessive, then an increased and pathological form of callus results, which tends to imperfect union and to deformities. The amount of callus present is therefore no indication of its competence; the efficiency of the callus should be judged rather from radiograms which demonstrate the development of these lines of increased density. Complete immobilization of a limb produces atrophy of the bones and rigidity of the joints, and while these can be corrected by the resumption of active movements it is better that these evils should be prevented, as far as possible, by not allowing immobilization to be complete. The authors conclude that the treatment of fractures should proceed along the lines which assist the ordinary reparative processes of nature, as little support as possible being given. If immobilization is necessary it should be interrupted at frequent intervals by active movements. Plaster casts are undesirable unless they allow earlier active movement than other apparatus, since they render impossible the valuable use of sunlight. Above all, strict attention to the general physical and mental condition of the patient will greatly assist in hastening repair and obtaining efficient function.

24. The Cerebro-spinal Fluid in Diphtherial Paralysis.

P. FORNARA (*La Clinica Pediatrica*, September, 1925, p. 547) records his observations on the changes in the cerebro-spinal fluid in seven cases of generalized diphtherial paralysis in children aged from 2 to 10 years. Although this subject has received much attention in France, Germany, and the United States, this is stated to be the first paper in Italian on the cerebro-spinal fluid in diphtherial paralysis. Fornara found that the intensity of the changes in the cerebro-spinal fluid bore no relation to the severity of the paralysis. The fluid was perfectly clear in all cases. In five it escaped under considerable pressure. In only one case was there a great increase in the number of cells, while in the rest the number of cells was normal or only slightly increased. On chemical examination there was an increase in the albumin and especially of the globulin. Pandy's reaction was positive in all, the Nonne-Apelt-Ross Jones test was weaker and less constant, the Weichbrodt reaction was definite and sometimes well marked, Boveri's reaction and the Voisinet-Ajello reaction were positive in all cases. The spinal sugar was increased in all cases, with values intermediate between 0.70 and 0.85 per 1,000. The Wassermann reaction was always negative. The colloidal benzoin test was perfectly normal in three cases, doubtfully positive in one, and in three slightly deviated to the right. The cerebro-spinal fluid thus presented slight but definite changes in all cases of diphtherial paralysis, as had been shown by Lavergne and Regan.

25. Posterior Pituitary Extract.

W. SCHLAPP (*Quart. Journ. Exper. Physiol.*, October 30th, 1925, p. 327) investigated the active principles of the posterior lobe of the pituitary body with a view to finding out whether the many physiological responses evoked by its extracts were attributable to one or more active principles. The methods used in the preparation and preservation of extracts and in the estimation of their oxytocic, pressor, and other activities are described; so far as the pressor and oxytocic principles are concerned there appears to be evidence of the existence of different substances, though it may be that the pressor and melanophore responses are due to the same substances. It was found that when depressor-free extracts were boiled with dilute hydrochloric acid the oxytocic, pressor, and melanophore responses were slowly and simultaneously destroyed. It was possible also to separate a fraction containing the greater part of the oxytocic activity by treating depressor-free extracts with N-butyl alcohol. Experiments indicated that the oxytocic activity on the one hand, and the pressor and melanophore on the other, must be due to distinct substances, but there was no positive evidence that the two latter were not attributable to one and the same principle.

26. Basal Metabolism in Cancer of the Stomach.

C. B. UDAONDO, J. E. CARULLA, and H. ZUNINO (*Arch. Arg. de enferm. del apar. dig. y de la nutrición*, October, 1925, p. 13) record their observations on eighteen cases of carcinoma of the stomach in various stages in which they studied the basal metabolism. In every case there was a more or less considerable fall in the metabolic rate. This fall did not bear any relation to the size of the growth, but was attributed by the authors to the reduction in the amount of food taken owing to the anorexia which is the rule in this disease.

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

27. The Blood Pressure in Tuberculosis.

W. B. JAMESON (*Therapeutic Gazette*, November 15th, 1925, p. 770) has studied the blood pressure in 1,200 patients suffering from pulmonary tuberculosis, and has found that the average for men is—systolic 113 mm., diastolic 68 mm.; while for women it is—systolic 106 mm., diastolic 63 mm. He also found that age had very little effect on the blood pressure of the tuberculous patient, but that the rate of lowering of the blood pressure was proportional to the rapidity and extent of involvement of lung tissues. He states that the lower the blood pressure the worse is the prognosis. Wilkes believed that a low systolic pressure without any other manifest disease to cause it pointed conclusively to tuberculosis, but Jameson considers a low pressure to be only suggestive of this disease; he advises that patients with low systolic pressure should be carefully watched.

28. M. VILLARET and M. MARTINY (*Presse Méd.*, November 28th, 1925, p. 1569) have investigated venous pressure in a series of 200 cases of tuberculosis, and find that the pressure is raised in most cases. The exceptions occur in cases of a very toxic type, as in miliary tuberculosis. They recognize two other factors which might cause this rise—one is venous engorgement, due to cardiac weakness, and the other is direct pressure on the veins in the thorax; but they hold that a rise may also occur when neither of these factors is applicable. They add that clinically the importance of these findings is, first, that a venous rise precedes a haemoptysis in every case, and secondly, that in artificial pneumothorax a rise indicates that the limits of tolerance have been reached.

29. The Development of Endocarditis.

M. RENAUD (*Bull. et Mém. des Hôp. de Paris*, November 5th, 1925, p. 1352) remarks that nowadays the distinction between simple and malignant endocarditis is not retained in classification. Examination of the anatomical lesions of endocarditis shows that the essential feature is alteration of the superficial layers of the endocardium by thrombosis. Clinically there are three categories: acute endocarditis developing in the course of some acute illness; chronic endocarditis secondary to some unknown focus and manifesting itself in pyrexia and pyaemia; and, lastly, there is the much underrated endocarditis of cancer patients, Renaud having found endocarditis fourteen times in 136 cancer necropsies. The cancers most often complicated thus are large ulcerating lesions of the rectum, face, or uterus. He adds that clinically, at any rate, these complications of cancer by endocarditis are most insidious; diagnosis during life is perhaps possible only by blood cultures, though the necropsy discloses as copious valvular lesions as in typical malignant endocarditis. Every intermediate degree may be found between a quickly fatal endocarditis and the type which continues almost indefinitely.

30. Collapse in Typhoid Fever.

R. DE BRUN (*Thèse de Paris*, 1925, No. 197), who reports fourteen cases of collapse in enteric fever, holds that the term "typhoid collapse" should be reserved for a definite syndrome which is the same in all carefully studied cases. The essential features are as follows: (1) A sudden fall of temperature which is more or less steep and may reach an extreme degree of hypothermia. (2) An equally sudden fall of blood pressure, which is more or less marked and often steep. It may be latent. When it is well developed it is manifested by the following symptoms: a remarkable change in the expression, the face being pinched as in peritonitis, and cyanosis which sometimes affects the skin generally. The various clinical forms depend on the rapidity, depth, and duration of the fall of temperature. Sometimes a sudden fall of blood pressure is manifested by transient syncope, convulsions, and sudden death. These two symptoms—the fall of blood pressure and the fall of temperature—are almost constant features of typhoid collapse, but there may also be transient tachycardia and, less frequently, transient polypnoea. The curves of the fall of temperature and blood pressure are not simultaneous or identical, but run their course independently. The principal feature of typhoid collapse is its essentially transient evolution. It is an attack which may last from three or four hours to three or even four days. The prognosis of the attack is often good, but relapses are frequent. In most cases the temperature is a guide to the duration of the collapse, just as the fall of temperature is to the gravity of the condition. The occurrence of collapse is independent of the gravity of the original disease, and in like manner it has no effect on the progress of the disease, which pursues its ordinary course when the collapse has passed off. The collapse is not due to cardiac failure, as examination of the heart before, during, and after an attack remains negative. It can only be due to a bulbar deficiency, which is sudden though transient. The different centres (thermal, vasomotor, cardiac, and pulmonary) may be inhibited more or less completely.

31. Purpura Haemorrhagica of the Bladder.

F. DE GIRONCOLI (*Arch. Ital. di Urol.*, July, 1925, p. 632) states that the first example of this condition was described by F. Kidd in 1913, since when nine cases have been recorded, including the following case which came under his own observation. The patient was a robust and previously healthy girl, aged 17, who suddenly developed frequent micturition, strangury, and haematuria. Cultures of the urine were sterile. The Wassermann reaction was negative. The red cells numbered 4,500,000 and the leucocytes 6,300; haemoglobin 80 per cent.; differential count: polymorphonuclear leucocytes 46.5 per cent., lymphocytes 45 per cent., monocytes 4 per cent., transitionals 4 per cent., Türck's cells 0.5 per cent. On cystoscopic examination punctiform haemorrhages were seen in the mucous membrane of the bladder. Large ecchymoses developed at the sites where the blood had been taken for diagnostic purposes. Under treatment by vesical lavage with silver nitrate solution the vesical haemorrhages soon disappeared and complete recovery followed. The author concludes: (1) Purpura haemorrhagica of the bladder is not a nosological entity but the expression of a haemorrhagic diathesis of the whole organism, usually due to a toxi-infection. (2) Purpura haemorrhagica of the bladder and simple ulcer of the bladder are two distinct affections with the same etiology. (3) The diagnosis of purpura haemorrhagica of the bladder is made by cystoscopy, which shows the presence of characteristic haemorrhages in the fundus of the bladder. (4) Treatment consists in vesical lavage with a solution of silver nitrate in a strength of 1/4 to 1 in 1,000. (5) The prognosis is favourable. Under suitable treatment the haemorrhages and subjective disturbances disappear in a few weeks' time.

Surgery.

32. Plexiform Neuromata.

G. BELL and K. INGLIS (*Med. Journ. of Australia*, October 3rd, 1925, p. 423) report a case of plexiform neuromata with associated local hypertrophy and multiple chondromata in a girl, aged 20, who had had the middle finger of the left hand removed in infancy for hypertrophy. The swelling in the left index finger of which she now complained had been noticed first when she was 14 years of age. This swelling had increased in size and had extended upwards so as to occupy a great part of the radial side of the hand and the flexor aspect of the lower third of the forearm; there was some pain. The authors also report (ibid., p. 427) a similar case in a farmer, aged 54. He gave a history of having been born with a large left upper limb, the thumb, index, and middle fingers of which were removed when he was 18 months of age. Nine months before he was admitted to hospital he fractured his right femur, and after this he noticed weakness in the left arm and increase in its size. In both cases the tumours were soft with an irregular cord-like structure, and on pathological examination were proved to be plexiform neuromata. As a result of their experience in these cases and study of the literature the authors suggest that the plexiform neuroma is the primary and essential lesion, the localized hypertrophy and multiple chondromata being secondary effects.

33. Apophysitis of the Os Calcis.

P. LEWIN (*Surg., Gynecol. and Obstet.*, November, 1925, p. 579) describes apophysitis, or inflammation of the epiphysis at the posterior portion of the os calcis, a condition but little noticed in the textbooks or literature. He considers that it is analogous to Legg's disease in the hip or Osgood-Schlatter's disease of the tibia, and attributes it to internal or external trauma combined with local circulatory disturbances affecting the apophysis at its critical period of growth. The onset is insidious, with or without history of injury, and occurs

usually in boys between the ages of 9 and 13. A limp is generally the earliest symptom, and there may be pain, tenderness, and thickening over the affected part, a slight equinus condition developing owing to disinclination to stretch the tendo Achillis. Radiographical examination shows irregularity and thickening. The prognosis is excellent if the limb is put in plaster from the toes to above the knee, with the foot in slight equinus and the knee in slight flexion to relax the pull of the triceps. After a fortnight this is replaced by another plaster application from the toes to just below the knee, the foot being now placed at a right angle. A month later a high laced shoe is used with three-quarters of an inch cork lift for the heel, crutches being used for a further two weeks. In very mild cases elevation of the heel and the insertion of a felt or rubber pad may be all that is necessary.

34. Bursal Exostosis.

A. ABRAMOWA (*Zentralbl. f. Chir.*, November 21st, 1925, p. 2649) describes a case of bursal exostosis. The etiology of this disease is obscure and the diagnosis may be difficult when the bony tumour is situated deeply under muscles. A peasant woman, aged 48, whose eldest daughter had died from tuberculous osteitis, complained of a swelling in the lower part of the right popliteal space, which, although not increasing in size, rendered prolonged standing or walking impossible on account of pain radiating down the leg. There was some oedema of the right leg below the swelling, which was of bony hardness and quite immobile. The circumference of the right knee was less than that of the left joint, and flexion was limited to 60 degrees. All movements of the ankle and foot were free. On separating the two heads of the gastrocnemius, the tumour was found to consist of three thin-walled sacs, communicating with each other by narrow necks; these were filled by three masses of bone united by slender pedicles, and a thicker pedicle formed the attachment to the upper third of the posterior surface of the tibia, apparently at the level of the junction of the epiphysis and shaft. The three sacs represented the bursa beneath the semimembranosus. The large proximal mass consisted of bone and hyaline cartilage, and was attached to the tibia by a thick pedicle which had to be divided by a chisel. The operation two years ago was completely successful, and there has been no recurrence.

35. Pancreatic Cysts.

H. ROTH (*Amer. Journ. of Surg.*, November, 1925, p. 257) points out that cysts of the pancreas are not at all common, and that their diagnosis is usually difficult. Pain is often present and loss of weight is generally marked; sugar in the urine is sometimes present. It is believed by many that these cases of so-called pancreatic cyst when of traumatic origin are really effusions into the lesser sac of the peritoneum. Traumatism may cause a true cyst or a pseudo-cyst; if true, the cyst may appear soon or late after the injury. Haemorrhagic cysts are usually of traumatic origin, but may also result from acute pancreatitis. Cysts of the pancreas are usually single; they have a smooth surface and are tense. The early symptoms are vague, including epigastric pain, flatulence, and indigestion; jaundice may be present, and there is usually loss of weight. The tumour is usually fixed, but may be movable. The diagnosis is often only made at exploratory operation, and treatment is always surgical. If the cyst has a small pedicle it may be entirely removed. The safest operation, however, is evacuation of the fluid and drainage of the cyst. Frequent changes of dressing are necessary and the skin must be protected from irritation. The cavity fills up with granulations, though occasionally a fistula persists. *X*-ray treatment and antidiabetic diet have been advised to hasten closure of the fistula. The results of surgical treatment are usually satisfactory.

36. Treatment of Liver Abscess.

O. CIGNOZZI (*Lyon Chir.*, September–October, 1925, p. 597), dealing with the surgical treatment of hepatic abscesses, distinguishes between those arising in the right lobe and those in the left lobe of the liver. The abscess may be found uncomplicated or it may be adherent to the abdominal parietes. The author bases his experience on thirty-three cases, and finds that abscesses of the right lobe are always larger and more extensive than those arising on the left side. He holds that the best approach for an abscess of the left side is by a longitudinal mid-line incision above the umbilicus. If the liver is not adherent to the abdominal wall it may be sutured to the parietal peritoneum or packed round with gauze before the abscess is opened. After evacuating the pus the abscess cavity is packed for several days. Abscesses of the right lobe when large may be drained through an incision dividing the fibres of the right rectus muscle. Where the abscess lies under the costal region an oblique incision below the lower ribs is made; this is considered preferable to resection of the ninth or tenth rib, which often results in a fistula. In the rare cases where the abscess lies on the posterior aspect of the right lobe it should be drained by a transverse incision in the lumbar region which gives satisfactory drainage. In the thirty-three cases recorded there were seven deaths. Death is usually due to hepatic insufficiency or toxaemia, and sometimes to pyaemia or the secondary formation of a subphrenic abscess.

Therapeutics.

37. Sanocrysin in Pulmonary Tuberculosis.

V. BIE (*Ugeskrift for Laeger*, November 19th, 1925, p. 1023) records several cases of acute febrile pulmonary tuberculosis treated with sanocrysin. He started with a dose of 0.25 gram and gradually increased to 1 gram, a total of 5.25 to 5.50 grams being given in one series of injections, and the interval between each injection being at least five days. An interval of three to four weeks was allowed between the first and second series of injections. In those cases which responded satisfactorily the temperature gradually fell to normal during the first series of injections, but it was only later that improvement was detected in the appetite, the general condition, and the stethoscopic signs. P. KÜHNEL (ibid., p. 1036) has compared the results in twenty cases one month after the completion of treatment with the results in fifteen of these cases from two to seven months later. The first results were fair with three exceptions, two patients in the third stage of the disease and one in the second stage developing violent and fatal exacerbations. Between two and seven months later two more patients had died, and only three of the remaining fifteen had maintained their improvement. Kühnel fears, therefore, that even when the immediate effects of sanocrysin are good, the gain is seldom maintained. G. E. PERMIN (ibid., p. 1037) recommends for adults a first dose of from 5 to 10 cg., and every fourth day, when the febrile reaction has passed off, this dose is increased by 5 to 10 cg. provided there is no albuminuria or rash. When the dose has been increased to 25 or 30 cg. the interval between each injection is lengthened to one week, and each dose is increased by 5, 10, 15, or 20 cg., the rate of increase being determined by clinical indications. When the dose has reached 1 gram the injections are continued at this level till no reaction occurs. He recommends also a second series of injections during which the dose may be increased more rapidly. He claims that the discomforts and dangers of early sanocrysin treatment have been much reduced, and that the results are as good as those with the original dosage.

38. C. BENEDETTI (*Il Policlinico*, November 9th, 1925, p. 1557), after a careful study of the results obtained in the treatment of pulmonary tuberculosis by sanocrysin, gives a qualified approval. He agrees that it has a bactericidal action on the tubercle bacillus, but is not devoid of danger, the chief troubles being albuminuria, shock, and the minor inconveniences of serum injection. He finds that the most suitable cases are those of the recent exudative type where the disease is neither extensive nor very active; little benefit was obtained in fibrous types or in surgical tuberculosis. Improvement was indicated by decrease of the cough, gain in weight, and disappearance of night sweats, while there was also radiographic evidence of benefit. Benedetti agrees also that sanocrysin must not be used when there is much fever, cardiac weakness, diarrhoea, or profuse night sweats, and that in any case sanatorium treatment should be given simultaneously.

39. Serum Treatment of Typhoid Fever.

A. RODET (*Journ. de méd. de Lyon*, November 5th, 1925, p. 619), who has collected more or less detailed information about 1,500 cases of typhoid fever in France and foreign countries treated by his serum, records statistics of 679 cases. Of these patients, 66 died—a mortality of 9.7 per cent. The best results were obtained when the serum was given early, the mortality being only 2.3 per cent. among 86 cases treated within the first five days. Like the mortality, the average duration of the disease and the frequency of complications and relapses were reduced by early administration of the serum. Rodet claims that serum treatment is superior to balneotherapy, not only in being simpler to apply, but also in shortening the duration of the disease and even causing it to abort, if the treatment is begun sufficiently early. The serum may be given at any stage of the disease, but it is best to use it as early as possible. It should be given in larger doses than has hitherto been done, at least in some cases. It should be the only form of treatment applied and should not be associated with antipyretic drugs, baths, or other methods of reducing the temperature.

40. Vaccine Treatment of Whooping-cough.

A. PONDMAN (*Nederl. Tijdschr. v. Geneesk.*, October 24th, 1925, p. 1893) records the results of a questionary sent to medical practitioners who had employed the pertussis vaccine prepared by the Dutch Serological Institute at Utrecht; 89 answers were received, with the following results. The local reaction appears to have been insignificant. Only six practitioners stated that a small infiltration had occurred after large doses had been given, and in one case a transient urticaria was observed. As regards a general reaction 18 showed a slight rise of temperature not exceeding one degree, and in 5 the temperature was somewhat higher, the highest recorded being 102.6°. No reply was received about a focal reaction—that is to say, the effect of the vaccine on the respiratory tract. As regards the prophylactic value of the vaccine 12 answers were received, of which 8 were favourable, 3 were partly favourable, and 1 unfavourable. Of the 89 answers concerning the curative effect of the vaccine, 21 had to be excluded as the numbers treated were too small to justify a conclusion. Of the remaining 68, 61 were favourable and 7 unfavourable. Pondman's conclusions as the result of the answers to the questionary are as follows: (1) As a general rule it is advisable to increase the dose. (2) There is no objection to this, as no bad results were reported. (3) The vaccine should be used as early as possible. (4) It is essential that it should be prepared from different strains of pertussis bacilli.

Laryngology and Otology.

41. Tracheotomy in Tuberculous Laryngitis.

T. RITCHIE RODGER (*Journ. of Laryngol. and Otol.*, October, 1925, p. 639) describes four cases of tuberculous laryngitis in which urgent tracheotomy had to be performed on account of dyspnoea. Three patients progressed extremely well after this procedure and the laryngeal tuberculosis cleared up satisfactorily. The fourth patient had very extensive lung infection and died about two months after the operation; he had, however, derived great benefit from the tracheotomy. In all four cases a fatal issue was certain without a tracheotomy. In these cases there is no question about the propriety of performing tracheotomy, but a much more difficult problem is set by the severe tuberculous laryngitis which does not improve and which has no signs of dyspnoea. Even after tracheotomy the cords move during deglutition, during quiet respiration, and during forced movements of the arms, as was pointed out by Negus. Tracheotomy, therefore, does not put the larynx at rest completely, but it eliminates speech, and is of value chiefly in those cases in which the disease is progressing, and the patient is incapable of observing the rule of strict silence. In favour of tracheotomy it may be said that the inspired air no longer passes over an ulcerated tuberculous area nor does the infected sputum reach the already damaged laryngeal mucosa. Against tracheotomy is the fact that cold dry unfiltered air is passed straight into the lungs, which are already weakened by tuberculosis, and there is the much greater difficulty of protecting the nursing staff and other attendants from the infected sputum. The author concludes that tracheotomy should be reserved for cases of marked dyspnoea and for patients in whom the complete silence regime is not possible.

42. Leptomeningitis in Acute Otitis.

C. FERRETTI (*Arch. Ital. di Otol., Rinol. e Laringol.*, October, 1925, p. 628) recalls the conferences at Perugia and Paris in 1922 on meningitis following otitis media and the various methods of treatment adopted. Gradenigo relied on a very extensive excision of the diseased area in the tympanum and mastoid process, laying bare a wide area of the dura mater, and on repeated lumbar puncture. He also injected autogenous vaccines and colloidal metals. Jenkins, however, considers that the infection travels through the labyrinth and internal auditory meatus, and treats such cases by opening up the internal ear and draining through the meatus. Turner performs the mastoid operation and employs lumbar puncture, but if this does not bring relief he at once drains through the labyrinth. Ferretti now records the case of a man with acute otitis media who after seven days showed signs of labyrinthine affection—vertigo, headache, and tremors. By the tenth day he had definite signs of meningitis—retraction of the head and Kernig's sign. A very wide mastoid operation was performed, and the operation area was irrigated by the Carrel-Dakin method. Lumbar puncture was performed four times daily with evacuation of large quantities (30 to 40 c.cm.) of turbid fluid. An autogenous vaccine was prepared and injected intramuscularly. Improvement began at once, and in a month the patient was discharged quite well. Three weeks later there was a recrudescence, but by thoroughly irrigating the mastoid cavity with Dakin's solution and practising lumbar puncture recovery was speedy and complete. The author considers that the above is the ideal method of treatment and is strongly opposed to opening up the dura mater or of interfering unnecessarily with the labyrinth. When, however, the meningitic symptoms are preceded by signs of labyrinthine inflammation drainage through the internal ear is not irrational, though in many of these cases his own line of treatment proved sufficient. The repeated lumbar puncture he considers most important, as it serves to wash out the cerebro-spinal space and to keep down the pressure of the fluid, which tends to inhibit the cerebral blood supply.

43. Oto-sclerosis.

R. LAKE (*Journ. of Laryngol. and Otol.*, August, 1925, p. 512) does not accept heredity and congenital syphilis as etiological factors in oto-sclerosis. According to him any hereditary taint is confined to a tendency to nasal deformation and to tonsillar disease. Middle-ear disease is common in connexion with nasal irregularities and the consequent catarrh, but is more often found in cases of slight degree, and especially when the deformity is skeletal and not merely of the soft tissue. Tonsillar disease is very prolific of middle-ear disease, and acts as a septic focus which appears to be the exciting cause in a great many cases. Lake states that a considerable number of the so-called cases of oto-sclerosis in children are really of a different nature and tend to get better, a phenomenon which apparently rules out oto-sclerosis. The typical symptoms of oto-sclerosis are Bezold's triad (loss of low tones, prolonged bone conduction, and negative Rinne reaction), tinnitus, and the ability to hear better in a noise. The loss of low tone is a symptom which is present in all cases of Eustachian obstruction, and varies enormously with the type and pitch of tuning-fork used. Prolonged bone conduction is, again, a symptom of Eustachian obstruction, but also occurs as a result of rigidity of the ossicular chain. Rinne's reaction naturally varies in concert with the above test. Tinnitus commencing early in deafness is Eustachian in origin; when occurring in more established deafness it is probably due to stapedial immobility. Paracusis Willisii always occurs in stapedial immobility, but also appears in boiler-maker's deafness and the like. The author considers that the red reflex in the drum is a sign of a patch of rarefying osteitis beneath. Treatment consists in the radical elimination of septic tonsils, teeth, and other foci of infection, and the correction of nasal deformities. In conclusion, the author is doubtful if there is really a definite entity to be called oto-sclerosis, and suggests that further work will put this group of symptoms into the main category of non-suppurative deafness.

Obstetrics and Gynaecology.

44. Version in Central Placenta Praevia.

P. BALARD (*Gaz. hebd. des Sci. Méd.*, November 29th, 1925, p. 756) reports a case of total placenta praevia occurring in a country district in which removal to hospital would have meant recurrence of the bleeding and a dangerous delay. He emphasizes the point that obstetrical, as compared with surgical, treatment has a wider application in multiparae than in primiparae. Nevertheless, although his patient was a primipara, he at once perforated the placenta, performed version (there had been a head presentation), and delivered a living child; the mother was able to leave her bed on the fifteenth day. In this case the os was soft, and nearly the size of a penny; a primipara with a small rigid os would have required different treatment. Balard adds that another factor to be kept in view when determining treatment is that sepsis supervening upon obstetrical measures is a slower and more amenable complication than sepsis following Caesarean section, which may happen in spite of every care being taken with the abdominal wound.

45. The Cause of Eclampsia.

H. ELWYN (*Amer. Journ. Obstet. and Gynecol.*, November, 1925, p. 698) remarks that there have been several attempts to explain the phenomena of eclampsia in pregnancy, and that the modern tendency is to ascribe them to the toxic effects of metabolic substances derived from the placenta. Volhard thought that the clinical manifestations of eclampsia resulted from a general arterial spastic contraction. Elwyn states that stimuli controlling both uterine contraction and vaso-constriction travel along the thoracico-lumbar branches of the sympathetic nervous system; that uterine contractions can be influenced by stimuli applied to the anterior part of the optic thalamus and to the floor of the third ventricle; that in the medulla there is a vasomotor control centre; and that general vaso-constriction can be obtained by stimulating the region of the hypothalamus. He concludes that the

centres for control of vaso-constriction and uterine contraction are closely related to one another and the impulses travel along almost the same neural paths. He suggests that with the beginning of pregnancy there is an increase in the excitability of the nerve supply to the uterus and of the corresponding centre in the brain, and that the close proximity of the centre for vaso-constriction permits this increased excitability to spread to it. This condition of the nervous mechanism becomes more marked as pregnancy progresses and lasts as long as the uterus is required to contract—that is, into the puerperium. Elwyn states further that the increased excitability is probably present to some extent in every case of pregnancy, but that only in some cases does it become sufficiently pronounced to cause a general spastic contraction of the pre-capillary arterioles. He suggests that those stimuli which cause eclampsia are variable, and include emotional stress, excessive physical effort, and the passage of the child's blood into the mother's circulation should incompatibility exist. It is this general arteriole contraction which, in his opinion, gives rise to the clinical manifestations of eclampsia and to the histological changes found in this disease.

46. The Physiology of Menstruation.

S. D. LUDLUM and E. MCDONALD (*Surg., Gynecol. and Obstet.*, November, 1925, p. 569) recall that the longitudinal muscle of the uterus is stimulated by the vagus and inhibited by the sympathetic system, that the circular muscle is stimulated by the sympathetic and inhibited by the vagus, and that the muscle of the intestine reacts in the same way to the same impulses. Acting on this they have made a number of radiographic examinations of the intestinal muscular tone before and during menstruation. These examinations indicated that normally during the intermenstrual period the innervation inclined towards sympatheticotonia; during menstruation there was a preponderance of vagus stimulation, and during the subsequent five days the smooth muscle reaction gradually returned to normal. They suggest that the pains and cramps associated with menstruation may be due to vagus stimulation of intestinal muscle, and that the constipation which so often occurs at this time may be the result of stimulation of the pelvic branch of the vagus. They believe that Blair Bell's conclusions in regard to the influence of calcium on menstruation are probably correct, and suggest that the vagotonia during this period is, in part at least, due to the accumulation of calcium in the blood and tissues and that calcium is excreted during menstruation. They have found that drugs and salts which inhibit the vagus or stimulate the sympathetic lessen the pain of dysmenorrhoea, and those which stimulate the vagus increase the menstrual pain and flow.

47. Endometrial Hypertrophy and Ovarian Tumours.

H. O. NEUMANN (*Zentralbl. f. Gynäk.*, November 28th, 1925, p. 2695) has been able independently to confirm a recent report of R. Meyer that a pathological hypertrophy of the endometrium is not infrequently associated with the presence of ovarian tumours. Meyer's cases, like those of French observers, were chiefly those of women who had passed the climacteric; but Neumann's patients included three aged respectively 34, 35, and 36. In one of these a considerable degree of hyperplasia and hypertrophy of the endometrium was demonstrated microscopically, and in the other two the uterus was found by clinical examination and at operation to be enlarged and soft. In one of Neumann's cases, and in a patient aged 25 reported by Aschner, irregular and copious haemorrhages were succeeded, after removal of the ovarian tumour, by regular and less abundant menstruation. In another case the patient, aged 50, had post-climacteric bleeding in association with recently developed ovarian carcinoma. Neumann feels justified in concluding that an endometrial hypertrophy is brought about by internal secretion of the granulosa cells in ovarian tumours.

Pathology.

48. The Action of Iodine in Exophthalmic Goitre.

W. F. RIENHOFF, jun. (*Bull. Johns Hopkins Hosp.*, November, 1925, p. 285), discusses the histological changes brought about in cases of exophthalmic goitre by the administration of iodine. Three successive typical cases were studied, in each of which the basal metabolic reaction was well above 50 before the administration of iodine, but afterwards there was a striking clinical improvement with a precipitous drop in the basal metabolic rate. The changes produced by iodine were found to be an increase in the size of the gland with a decrease in vascularity and probably in lymph flow through the gland; there was a large increase in the amount of fibrous connective tissue and of colloid. The acini from being lace-like papillomatous ingrowths became even-walled, smooth, and regular in size and form, with a transition of epithelium from high columnar to flat cuboidal and occasionally low columnar. The large clear nuclei of the epithelial cells became altered to the small irregular pycnotic type, and many mitotic figures present before the use of iodine disappeared after it had been given. The clinical improvement and lowered rate of basal metabolism were directly associated with the change from a typical histological exophthalmic goitre picture to a resting colloid state. Similar changes were noted in fifteen cases of exophthalmic goitre treated with iodine, as compared with fifteen who had had no medication. Rienhoff points out that an artificial remission is produced by iodine, and in the case of exophthalmic goitre this is associated with a change from a hyperplastic to a colloid state, even though definite hyperplasia remains, it being a question of relative hyperplasia. In operating he had noticed for some time that the glands of patients who had not been given iodine were more vascular than the glands of those who had been so treated; in the iodized cases also the glands were more fibrous, appeared to contain more colloid, and frequently showed small cystic areas.

49. The Pathology of Terminal Gastritis in Pulmonary Tuberculosis.

J. PARISOT, L. CORNIL, and P. HANSAL (*Rev. méd. de l'Est*, October 1st, 1925, p. 690) remark that until Marfan made a careful study in 1887 of the terminal gastritis in pulmonary tuberculosis little of value had been published by previous observers, as they had frequently mistaken the normal *post-mortem* changes in the gastric mucous membrane for pathological lesions. Marfan came to the conclusion that the most frequent lesions were a mammillated appearance of the gastric mucosa with thickening; more rarely the mucous membrane showed polypoid vegetations or punctiform erosions. On microscopical examination the inflammation was found to be interstitial at first, the covering epithelium undergoing only secondary changes. The erosions corresponded to accumulations of lymphocytes. Marfan regarded the lesions as indicating an infective gastritis like that found in general diseases with a tendency to suppuration, or as an irritative gastritis due to swallowing tuberculous sputum. Subsequent investigations have lent support to Marfan's views. As the result of naked eye and microscopical examination of the stomach in three cases of pulmonary tuberculosis in which the specimen was removed from three-quarters of an hour to two hours after death so as to avoid autolysis, the present authors found the following lesions: (1) Subacute gastritis characterized by granular and vacuolar degeneration of the gland cells in the fundus and especially the pyloric region. (2) A very abundant inflammatory infiltration of an interstitial lymphoplasmatic type with hyperplasia of the lymphoid follicles without specific tuberculous lesions. (3) Considerable congestion of the vessels of the mucosa and submucosa and even a few lesions of periarteritis and periphlebitis.

50. The Virulence of B. typhosus for the Oyster.

S. COSTA, R. HOVASSE, and L. BOYER (*C. R. Soc. de Biologie*, December 11th, 1925, pp. 1439 and 1441) inoculated ten oysters with about 200 million typhoid bacilli; all the oysters became diseased within four days, and nine died within three weeks. A loopful of the almost lysed body was used for culture after death, and in five out of the nine oysters *B. typhosus* was recovered. The water in which they had been kept was found free from typhoid bacilli. In another experiment twenty oysters were placed in water that had been contaminated with *B. typhosus* by the addition of one slope culture per litre of water. The majority soon showed signs of illness, and eighteen died within three weeks. Cultures were taken from seven of the oysters after death, and the typhoid bacillus was recovered four times. In one instance an oyster dying twenty-one days after the commencement of the experiment was not examined till a fortnight later; a culture of the putrid material proved positive, showing that the body of the dead oyster seems to be not unfavourable for the growth of this bacillus. The authors state that it is not justifiable to conclude from these experiments that the typhoid bacillus is pathogenic for oysters, because the mortality amongst the control uninoculated oysters was very high—60 per cent. But it does appear that the bacillus is able to live and probably to multiply in the body and visceral glands of the oyster—in other words, to prove virulent to it. Further experiments undertaken to determine how long an oyster may remain infected showed that when placed in contaminated water the oyster rapidly became infected, and remained infected for at least twelve days, when the experiment ended. The method of purifying oysters by placing them in clean water for a week or so would therefore seem to be ineffective.

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

51. Isolated Post-scarlatinal Adenitis.

P. NOBÉCOURT and L. LEBÉE (*Paris méd.*, November 7th, 1925, p. 385), who record an illustrative case in a boy aged 11, have drawn up the following classification of the types of adenitis occurring in scarlet fever: (1) Adenitis as the first manifestation of the disease, preceding the other symptoms and even the sore throat, and usually situated below the angle of the jaw. (2) Adenitis of the onset occurring simultaneously with the sore throat, rarely of large size and seldom ending in suppuration. (3) Adenitis of the second week of scarlet fever, usually situated below the angle of the jaw, accompanied by a rise of temperature, as a rule, of a few days' duration and with a good prognosis. (4) The typical scarlet fever bubo, which also occurs about the second week, and is associated with the tonsillar and pharyngeal complications of this stage of the disease. (5) The adenitis described by Leichtenstern in 1882 and by Stembo in 1900. This occurs a little later than the last form, is usually situated below the angle of the jaw, and is not accompanied by sore throat. It is a mild complication in itself, but is of grave prognosis, as it precedes the appearance of severe nephritis by one or two days. (6) True post-scarlatinal adenitis, which occurs towards the end of the third week, or in the fourth or fifth. It may be an isolated phenomenon. It is important that the practitioner should be familiar with it, so that he should not attribute it to another cause, especially tuberculosis. It also serves as an indication of a previous attack of unrecognized scarlet fever, like desquamation of the fingers and toes. It cannot be determined at present whether the late adenitis is due to a recrudescence of the agent of scarlet fever or to a secondary infection. Isolated post-scarlatinal adenitis is accompanied at its onset by a transient rise of temperature, and sometimes by slight headache and vomiting. It may assume three different types: (1) As a rule, it is most pronounced below the angle of the jaw; it is sometimes unilateral and may be confined to a single gland. (2) Sometimes the swelling of the face is so marked as to suggest nephritis, and it is difficult to distinguish the separate glands. (3) Sometimes, as in the case reported by the present authors, the first gland to be enlarged is in the supraclavicular region, the cervical chain being affected later.

52. Acquired Immunity to Tuberculosis.

A. DE BESCHE and J. O. JÖRGENSEN (*Norsk Mag. for Laegevidenskaben*, November, 1925, p. 1229) have compared the death rate from pulmonary tuberculosis in Oslo during 1921 and 1922 among the natives of this city with that among the persons who had moved from other parts of Norway into it and had died there. It has been calculated that by the time a native of Oslo has reached the age of 7 there are overwhelming odds in favour of tuberculosis having already been acquired. On the other hand, a certain proportion of the persons moving into Oslo from country districts may be supposed to have escaped infection with tuberculosis in early childhood. Comparison of the tuberculosis death rates for the natives and the immigrants into Oslo might, therefore, give a clue to the influence of early infection on the mortality from tuberculosis in adult life. If a slight infection in early childhood confers immunity in adult life, then the mortality from tuberculosis among the adult natives of Oslo should be less than that of the immigrants into this city. Of the 5,849 persons who died in Oslo in 1921 and 1922, only 2,301, or 39.3 per cent., had been born there. There were 762 deaths from pulmonary tuberculosis—that is, about 13 per cent. of all the deaths—and between the ages of 15 and 40 the deaths from pulmonary tuberculosis numbered 337 among the natives and 155 among the immigrants. Thus, in this age group as great a proportion as 53.5 per cent. of all the deaths among the natives was due to pulmonary tuberculosis, whereas this was the case with only 34.2 per cent. of all the deaths among the immigrants. Above the age of 40, 5.7 per cent. of all the deaths among the immigrants were due to pulmonary tuberculosis, the corresponding figure for the natives being 6.7 per cent. The authors conclude that the total mortality among the immigrants was somewhat less than among the natives, and that in the age group 15 to 40 the mortality from pulmonary tuberculosis was less among the immigrants than among the natives of Oslo. They are sceptical, therefore, about the soundness of the teaching that exposure to tuberculous infection in early childhood confers immunity later in life.

53. Pulsating Veins in Cardiac Failure.

W. J. KERR and S. L. WARREN (*Arch. Intern. Med.*, November 15th, 1925, p. 593) discuss the occurrence of pulsations in the peripheral veins in failure of the heart with congestion associated with pulsation of the liver and tricuspid regurgitation. From observations of 56 cases of pulsations in the basilic veins the authors found that the condition was associated with some degree of myocardial damage and showed many of the signs of tricuspid incompetency—namely, cyanosis and dyspnoea, oedema and ascites, dilated right heart, a systolic murmur over the lower sternum, a large pulsating or tender liver, marked pulsations in the jugular veins, increased venous pressure, visible and palpable pulsations in the peripheral veins, especially the basilic, myocardial damage, and occasionally right-sided hypertrophy. In the presence of extensive valvular lesions and marked decompensation these venous pulsations are held to indicate a bad prognosis because of pronounced heart failure, and in less marked cases they should be regarded as a warning of early heart failure. Though other clinical signs may be present, the pulsating veins may be the earliest outstanding sign and be indicative of the degree of myocardial and tricuspid incompetency. The pulsations in the basilic veins may vary from a flicker to large excursions of from 2 to 3 cm.; they are centrifugally propagated by the contractions of the right ventricle and are associated with venous stasis.

54. Tetany and Convulsions in Whooping-cough.

G. F. POWERS (*Amer. Journ. Dis. Child.*, November, 1925, p. 632), who records five cases in infants aged from 4 to 17 months, maintains that infantile tetany and not anatomical injuries or an unknown toxin is often the cause of convulsions in whooping-cough. The electrical reactions of two infants, the only patients in his series on whom these determinations were made, were strongly suggestive of tetany in that they showed anodal hyperirritability. In one case the spinal fluid was examined and found to be negative, so that meningitis and cerebral haemorrhage were eliminated as causes of convulsions in that patient. In all the patients the calcium concentration in the blood was less than the normal 10 mg. per 100 c.cm., the lowest being 4.9 mg. and the highest 8.9 mg. Powers recommends that the calcium concentration of the blood and electrical reactions of all infants with whooping-cough should be determined if possible, and treatment guided by the evidence for or against the existence of latent tetany. If these determinations cannot be made, calcium chloride should be given to young children who have pertussis complicated by convulsions, even if there is no clinical evidence of tetany and rickets.

55. The Spread of Diphtheria.

D. M. LEWIS (*Boston Med. and Surg. Journ.*, November 12th, 1925, p. 913) discusses the point that while the mortality of diphtheria has now been very greatly reduced, its occurrence has been little if at all influenced. He believes that periodical epidemics of measles are followed by an increased number of outbreaks of diphtheria, and he finds that epidemiologically, statistically, and biologically it is possible to correlate variations in the morbidity of diphtheria with epidemic measles. There appears to be little doubt that the nasal catarrh at the onset of measles, when affecting diphtheria carriers, is an important factor in the spread of diphtheria. Lewis believes that the spread of diphtheria would be much diminished by detecting and isolating diphtheria carriers, whether the bacteria were virulent or avirulent, during and following all respiratory infections, but particularly measles. He doubts, however, whether this would be equally effective in diminishing the mortality. He recommends that laboratory reports should not only state "diphtheria negative," but should define the predominant organism, as in this way the hidden factor in the varying mortality from diphtheria may be discovered. He supports his contentions by much statistical evidence.

56. The Etiology of Osteitis Deformans.

G. GUILLAIN and N. PÉRON (*Ann. de Méd.*, September, 1925, p. 167) report a case of associated tabes dorsalis and osteitis deformans (Paget's disease). While the authors do not think that the latter is always of syphilitic origin, they believe their case to be rather suggestive. A man, aged 54, had suffered from tabes dorsalis since 1919. In March, 1922, his blood serum gave a negative Wassermann reaction, but the cerebro-spinal fluid was positive. In August, 1922, the

patient had a spontaneous fracture of the left femur in the upper third of the shaft. The bones of the pelvis and lower extremities are generally thickened and unduly curved. The circumference of the skull has increased from 21 inches in 1913 to 22½ inches in 1925. The skiagrams of the cranial and long bones confirm the clinical diagnosis. Large areas of the ilia and sacrum are decalcified, and the lumbar vertebrae show similar changes. The symptoms of tabes dorsalis are typical and progressive. The authors suggest that the syphilitic origin of some cases of Paget's disease is probable, and also that this may not be a definite pathological entity. It is characterized by periods of alternating activity and quiescence, and if antisyphilitic treatment fails to cure either tabes or the bony lesions, it is at any rate probable that the progress of the lesions may be retarded or arrested temporarily.

57. Progressive Muscular Dystrophy in Congenital Syphilis.

G. C. BOLTEN (*Nederl. Tijdschr. v. Geneesk.*, October 17th, 1925, p. 1792) states that the part played by syphilis in the causation of muscular dystrophy is certainly unimportant, as cases with a positive Wassermann reaction have not, to his knowledge, been recorded. The reason for this is that in the great majority of cases progressive muscular dystrophy develops at a period of life when syphilis can usually be excluded, being most commonly found in children under 15 years of age. Bolten now records two cases of the juvenile type of progressive muscular dystrophy of Leyden and Moebius in two brothers, aged 19 and 12 years, in whom the early symptoms were first observed at 9 and 8 years of age respectively. The mother had had several miscarriages and gave a positive Wassermann reaction. The younger boy showed Hutchinson's teeth, although his Wassermann reaction was negative. Antisyphilitic treatment as well as endocrine therapy in the form of pituitary, thyroid, and suprarenal preparations had no effect. Bolten had previously pointed out (ibid., 1925, i, No. 6) that muscular dystrophy was in all probability due to polyglandular insufficiency in which the pituitary, thyroid, and chromaffin system were involved. In the present cases he considers that the muscular dystrophy was caused by the action of syphilis on the endocrine system, just as cases of infantilism in which there is a disturbance of the pituitary and thyroid, and possibly of the chromaffin system, are due to congenital syphilis.

Surgery.

58. Dermatoses as Premonitory Symptoms of Cancer.

A. HARF (*Zentralbl. f. Chir.*, November 28th, 1925, p. 2699) recalls the fact that Kuttner has recorded three cases of chronic pruritus in patients who were found subsequently to be suffering from cancer of the stomach. Harf had observed definite skin lesions—prurigo, erythema multiforme, and dermatitis herpetiformis—in cases of sarcoma of the thyroid gland and of the cervical lymph nodes, and in gastric carcinoma. He now reports two recent and typical cases in married women, aged respectively 55 and 57. The first patient had suffered for two years from anaemia and gastric pain, and for one year had had a chronic dermatitis, diagnosed as scabies. During the last two months the gastralgia was associated with nausea. An annular eruption appeared in the umbilical region, accompanied by intense itching and severe abdominal pain. Repeated skiagrams and chemical examinations of the contents of the alimentary canal failed to reveal any tumour or ulceration. The patient was well nourished, but her face was pale and greyish. The skin of the trunk was dirty and pigmented, and covered with old and recent scratches. No visceral tumour could be discovered. The abdominal wall was pendulous, and at the umbilicus there was a firm irreducible swelling as large as an apple, which was diagnosed as an omental hernia. A large ovarian carcinoma with metastases in the peritoneum (one of which was the supposed umbilical hernia) was discovered at the operation. The second patient, whose health had been good until June, 1924, complained of intolerable itching, with a recurring vesicular eruption over the entire trunk, limbs, and neck. Several dermatologists had made a diagnosis of dermatitis herpetiformis. For six months she had suffered from nausea, with eructations but no vomiting. Her complexion was greyish and she was rather emaciated. The left side of the neck was covered with a recent fine vesicular eruption. The trunk and limbs were extensively pigmented, the colour varying from light to dark brown. On the inside of both thighs the skin was much thickened, rugose, and dark grey. There was increased resistance and tenderness on pressure in the right hypochondrium. A skiagram showed delay in passage of food through the pylorus. An exploratory laparotomy revealed extensive carcinomatous infiltration of the pyloric region with fixation of the posterior wall of the stomach. Harf suggests that these dermatoses are due to absorption of toxins. No local treatment alleviated the skin lesions.

59. Periarterial Sympathectomy.

G. PIERI (*Arch. Ital. di Chir.*, October, 1925, p. 433) states that down to July, 1925, he had performed 23 periarterial sympathectomies on 19 subjects. In one case the sympathectomy was performed on the brachial artery under ether anaesthesia, and in 22 on the femoral artery under spinal anaesthesia, except in one case where, owing to the early age of the patient, ether was employed. The indications for the operation were as follows: (1) perforating ulcer, 2 cases; (2) simple or varicose ulcers of the legs, 3 cases; (3) osteo-articular tuberculosis, 4 cases; (4) neuropathic gangrene, 1 case; (5) circulatory disturbances in the lower limbs of arterial origin, consisting in more or less severe pain and occasionally gangrene of a circumscribed or progressive character, 9 cases. The results were as follows: In every case the operation had a good effect upon the symptom pain, but did not appear to exercise a definitely favourable influence on the nutrition of the tissues and local circulation. In some cases symptoms of ischaemic necrosis developed and usually increased, while in others the autopsy showed that in cases of bilateral circulatory disturbance unilateral sympathectomy was not only not followed by permanent vaso-dilatation, but the calibre of the small arteries such as the dorsalis pedis was smaller than on the side where no operation had been performed. G. BONANI (*La Chirurgia degli organi di movimento*, October, 1925, p. 569) performed perifemoral sympathectomy for varicose ulcers in 7 cases. The immediate results were fairly good, cicatrization being complete in 4, partial in 2, and absent in only one. The remote results, however, were disappointing. In only one of the four cases in which cicatrization was complete did the cure persist for eighteen months, while the other three had recurrence of their ulcers in fifteen days, three months, and five months respectively. Bonani therefore concludes that Leriche's operation has only very limited indications in the treatment of chronic varicose ulcer.

60. Surgical Treatment of Scoliosis.

H. PLAGEMANN (*Zentralbl. f. Chir.*, November 7th, 1925, p. 2528) states that the frequent failure of spinal supports to relieve the severe intercostal neuralgia in scoliosis and the excessive displacement of the back muscles in rachitic scoliosis are sometimes remedied by prolonged gymnastic treatment. By an elastic bandage the displaced scapulae may be approximated to each other and to the thoracic wall; the intercostal nerves are thus relieved from pressure, and the overstretched muscles may recover their tone. If this treatment fails Plagemann recommends the following operation. Two small horizontal skin incisions are made over the outer part of each scapular spine, the bone is exposed and through it a number of holes are drilled. Silk threads are then passed subcutaneously between the scapulae by means of a pedicle needle, and on "lacing" the threads through the perforations the scapulae are approximated. The ends of the silk are tied under the skin and cut off. A plaster bandage is applied for seven to ten days, and after its removal a light bandage is worn for a short time. Plagemann has performed this operation on a number of patients at ages varying between 3 and 30 years. G. PERTHES (ibid., p. 2529) criticizes Plagemann's operation, and doubts whether the good results are likely to persist.

61. Perforation of Peptic Ulcer into Peritoneal Cavity.

M. CHARBONNEL and F. LEURET (*Gaz. hebd. des Sci. méd.*, November 15th, 1925, p. 727) describe a case in which gastro-enterostomy had been performed three years previously, and double ulcers, jejunal and gastro-jejunal, had subsequently perforated into the peritoneal cavity in consequence of the patient transgressing the dietary rules ordered. The patient died though a second operation was attempted. The authors consider such an occurrence very rare. In a recent series of twenty-three peptic ulcers there had been no case of perforation, which was prevented probably by early operation. Formerly, when the surgery of gastric and peptic ulcers was mainly confined to emergency treatment, perforation into the open peritoneum was much more common, whereas now it is almost limited to patients in whom the ulcer is latent or who have been poorly supervised. As in any other case of perforation, violent exertion or the overloading of the stomach conduces to its occurrence. Of peptic ulcers the gastro-duodenal is the commonest form. The treatment recommended is suture after excision of the edges, as in the case of an ordinary ulcer, together with verification of the size of the gastro-jejunal orifice; if this orifice is too small a rapid new anastomosis is made, using the button.

62. Acute Arterio-mesenteric Ileus.

E. M. MCLAUGHLIN (*Minnesota Med.*, November, 1925, p. 670) reports two cases of acute arterio-mesenteric ileus occurring as a post-operative complication. This condition, he states, is characterized by symptoms of high obstruction, and usually occurs in persons who have lost considerable weight and who have general visceroptosis. In these circumstances, when the patient is in the dorsal position there is a considerable pull on the superior mesenteric artery, and thus the angle which the artery makes with the vertebral column and the aorta is obliterated. This compresses the transverse portion of the duodenum between the artery and the aorta, thereby producing obstruction. The patient persistently vomits a dark-coloured bilious material, which continues in spite of stomach lavage. There is no great abdominal distension and flatus is easily removed by enema. The respiration is shallow, the pulse rapid and weak, and the general condition becomes serious. The treatment which McLaughlin has found successful is to raise the foot of the bed on to 18-inch blocks, and to turn the patient into the right lateral prone position; this allows the caecum and intestines to float upwards and release the tension on the mesentery.

63. Appendicitis in Old Age.

A. G. J. HERMANS (*Nederl. Tijdschr. v. Geneesk.*, November 14th, 1925, p. 2188) remarks that appendicitis is pre-eminently a disease of early life, most of the cases occurring between the ages of 10 and 30. According to Strasburger, only 10 per cent. of the cases occur under 10 years of age, and then usually between 5 and 10. According to R. de Bovis, only 5 or 6 per cent. of all cases of appendicitis occur after the age of 50. The present author's paper is based on observations on 850 patients admitted to the Hospital of St. Francis at Rotterdam for appendicitis during the last four years. Of these, 33 patients, or 3.88 per cent., were aged 50 and over. The oldest was a woman aged 75, the oldest man was aged 69; 19 were men and 14 women; 18 were between 50 and 60, 13 between 61 and 70, and 2 were 71 and over. The diseases assumed the following different forms: (1) Acute appendicitis in 9 cases, 5 of which were in men and 4 in women. (2) Chronic appendicitis in 5 cases, 4 of which were in men and 1 in a woman. (3) A pseudo-neoplastic form in 6 cases, the disease simulating a malignant growth of the caecum or bladder. (4) Encapsulated abscess in 4 cases, 1 of which was in a man and 3 in women. (5) Appendicitis in a hernial sac in 3 cases, 2 of which were in an inguinal hernia in men and 1 in a femoral hernia in a woman. (6) Ileus in 3 cases; in only one of these was there a true ileus through the formation of bands originating from the appendix; in the other two there was a pseudo-ileus with suppurative peritonitis of appendicular origin. (7) Chronic appendicitis secondary to other processes—namely, cholelithiasis in 2 cases and duodenal ulcer in 1 case. Two cases of the first group and all those of the sixth group ended fatally. Dubs reports a mortality of 12 per cent. among 500 cases of appendicitis over the age of 50, and Mertens a mortality of 25 per cent. in 47 cases over 60, the causes of death being diffuse peritonitis, pulmonary embolism, collapse, or hypostatic pneumonia.

64. Acute Hypotension of Cerebro-spinal Fluid.

E. STULZ and P. STRICKER (*Annals of Surgery*, November, 1925, p. 678) consider the rational treatment of acute hypotension of the cerebro-spinal fluid to be intravenous injections of 30 to 50 c.cm. of distilled water. Hypotension occurs rather frequently in fracture of the skull, and the authors report three cases in which it followed cranial trauma and was efficiently treated by their method. Two patients required two injections in order to restore the pressure, and in one of these the pressure was actually seen to rise during the course of the second injection. Three injections were necessary in the other case. The authors have found the treatment both easy and safe, but they can offer no suggestion as to its mode of action except that possibly the injections alter the osmotic changes between the blood in the choroid plexus and the cerebro-spinal fluid in the subarachnoid spaces.

65. Lymphosarcoma.

F. BATTAGLIA (*Arch. Ital. di Chir.*, September, 1925, p. 113), who records two personal cases in men aged 60 and 29 respectively, states that lymphoid tissue is subject to morbid processes in which the clinical and pathological features are so ill defined that it is difficult to determine whether they are examples of lymphosarcoma or pseudo-leukaemia. A distinction between lymphosarcoma and small round-celled sarcoma is probably to be found in the karyokinesis which is present in the cells of the latter and absent in the former. X-ray treatment produces a diminution in size in sarcoma and sometimes a sufficiently pronounced improvement in the patient's general condition to suggest a cure, but sooner or later the growth resumes its course and death occurs.

Therapeutics.

66. Ether Injections in Pertussis.

A. GOLDBLOOM (*Journ. Amer. Med. Assoc.*, December 5th, 1925, p. 1791) discusses the treatment of pertussis by intramuscular and rectal injections of ether and points out the advantages of the latter method, except in very severe cases. Within one or two minutes after the injection of 1 to 2 c.cm. of ether intramuscularly it could be detected in the breath and remained noticeable for six to eight hours, with immediate and lasting improvement to the paroxysms; but the pain attending its administration and the possible danger of necrosis are serious drawbacks. The beneficial effect appears to depend upon the temporary sedative action during excretion through the alveoli, any specific bactericidal action being as yet unproved. Goldbloom has treated twenty-one children by rectal injections twice daily of half a drachm of ether in half an ounce of olive oil, and finds that the results compared favourably with those in patients treated intramuscularly. The rectal method can be easily employed by the mother or a nurse; the child is not in fear of a painful operation; there is no danger of necrosis; and the treatment can be safely continued for a much longer period than in the case of intramuscular injections. In an infant, aged 2 months, the paroxysms were completely controlled for six or eight hours, during which time the child scarcely coughed, though it ate and slept well.

67. Sugar Treatment of Acute Infections.

R. LATZEL (*Med. Klin.*, November 27th, 1925, p. 1797) describes a number of cases in adults in which threatening oedema of the lung and collapse were averted by the intravenous injection of 20 c.cm. of a 50 per cent. solution of grape sugar. In one case where there was cardiac degeneration a second injection was given. The patients recovered in all cases. The author then proceeded to treat a series of cases in the following manner. Protein shock was induced by the administration of an injection of 8 to 10 c.cm. of milk. This was followed twenty hours later by an injection of sugar solution with or without the addition of strychnine. This produced a rapid rise in temperature after the first injection, followed by an equally rapid fall after the second, and an amelioration of the symptoms leading to recovery. The treatment was most successful in adults between the ages of 25 and 45. Children did not react so well, and in some cases a rise of temperature occurred again a few hours later.

68. Phosphorus in Various Diseases.

A. CASTELLANI (*Journ. Trop. Med. and Hygiene*, November 2nd, 1925, p. 377) investigated the action of phosphorus in the treatment of various diseases, having discovered that the phosphorated oil of the *British Pharmacopoeia* could be administered hypodermically. Ampoules containing 5 minims of pure phosphorus oil and others containing half a minim diluted in 10 minims of almond oil may be obtained. In Oriental sore its action is specific, especially in old intractable cases with extensive ulceration, the oil being applied to the fundus and margin of the sore every other day. In nodular lesions 3 to 5 minims of oil may be injected into and around the nodule twice a week. Of two cases of granuloma inguinale one responded to the treatment and the other did not. No beneficial results followed its use in tropical sore, psoriasis, and lichen planus; and while it has no specific effect upon the malaria parasite, the administration of half a minim to 3 minims of the oil twice a week appears to act as an adjuvant of quinine. Encouraging results followed its use in rickets, osteomalacia, and beri-beri. The author adds that the action of phosphorus on the liver must be borne in mind and every precaution taken in its use, though he has not encountered any untoward result from its administration.

69. Treatment of Asthma with Tuberculin.

C. R. ÖSTERGAARD (*Ugeskrift for Laeger*, November 12th, 1925, p. 1001) has checked and confirmed, at the Bispebjaerg Hospital in Copenhagen, the claims made by Storm van Leeuwen and other Dutch writers as to the efficacy of tuberculin in asthma. Altogether 11 cases were treated. In 4 it was ineffective, but in all these cases the treatment could not be carried through satisfactorily. In the remaining 7 cases the results were excellent, although all the patients were much debilitated, had suffered from asthma for many years, and were subject to several attacks a day. Many had been given other forms of protein-shock treatment, but in no case with permanent improvement. Tuberculin would therefore seem to be a much more effective remedy than the other proteins commonly in use in the treatment of asthma. The first subcutaneous injection consisted of 0.0001 gram of Koch's old tuberculin. The temperature was then taken three times a day, and when there was a considerable rise the next injec-

tion was deferred till the temperature had become normal. As long as the temperature was normal the dose was doubled at each injection until a dose of 0.001 gram was reached. After this each dose was increased by 50 to 30 per cent. until a dose of 0.01 gram was reached. This treatment usually extended over about two months, and the patients had to be kept in bed only when an injection provoked a reaction. This was seldom violent, but most patients complained of slight headache, giddiness, and lassitude. The first injections usually gave rise only to a cutaneous reaction, but at a later stage they provoked a malaise suggestive of influenza. After this reaction had passed off the asthmatic attacks became less frequent and prolonged, and expectoration became easier and more profuse. The last injections seldom caused much disturbance, and in no case were alarming symptoms observed.

70. Sodium Sulphocyanate in Hyperpiesia.

J. B. NICHOLS (*Amer. Journ. Med. Sci.*, November, 1925, p. 735) recalls that the therapeutic use of sulphocyanates was first suggested in 1903 by Pauli, who found them to have a valuable sedative action in various circulatory and nerve disorders as well as in arterial hypertension. Nichols has used sodium sulphocyanate in the treatment of hyperpiesia for the last fourteen years with most satisfactory results. Those cases in which the hypertension was not due to organic changes in the arteries were the most amenable to treatment. He has found sodium sulphocyanate superior to any other drug in the reduction of blood pressure in appropriate cases, and has obtained marked lowering of 20 to 40 mm. or more after a few doses, although in some other cases the decline was more gradual. Nichols gives doses of 5 grains (1 teaspoonful of an 8 per cent. solution in water) thrice daily, well diluted, after meals; to this solution he adds a little phenol to prevent growth of fungi, and peppermint or similar aromatic to lessen the nausea which many of his patients experienced. This dose may be reduced to a half or a quarter of a teaspoonful if necessitated by the development of disagreeable symptoms, or as the blood pressure falls, and may be continued for several weeks in order to retain the lowered tension. He has found no indication of the sedative effects suggested by Pauli and other previous investigators. Nichols adds that there need be no apprehension of the formation of cyanide from the use of sodium sulphocyanate in therapeutic doses, although the drug is probably excreted slowly and a quantity greater than 3½ drachms may cause death in man.

71. Bismuth Hydroxide in Syphilis.

F. W. PORTMANN (*Dermatol. Woch.*, December 5th, 1925, p. 1781) recommends twice weekly injections of a milky colloidal preparation of bismuth hydroxide in syphilis. Commencing with a dose of 50 mg. of a proprietary preparation, all subsequent doses were of 100 mg.; the total number of injections given to each patient ranged from ten to fourteen. After such a course of intravenous injections it was found that the Wassermann reaction became negative, even in cases in which a previous course of salvarsan injections had failed to produce this result. After the first injection condylomata began to shrink, their surfaces became dry, and usually, after three or four injections, they disappeared entirely. In almost all cases spirochaetes had disappeared within twenty-four hours of the administration of the first injection. The value of bismuth in salvarsan-resistant cases was shown by a case of secondary syphilis in which there were numerous hypertrophic papillomata on the genitals. The Wassermann reaction was strongly positive after a course of twelve injections of salvarsan, which had had no effect upon the papillomata. After one injection of 50 mg. of bismuth-diasporal the warts began to shrink, and after three more injections (each of 100 mg.) they disappeared, and the Wassermann reaction became negative. Though most bismuth preparations tend to produce stomatitis, gingivitis, and renal lesions, in no case in Portmann's series was there any evidence of toxic effect.

Radiology.

72. Uretero-pyelography.

S. A. SARMIENTO (*Arch. de med., cir. y esp.*, November 14th, 1925, p. 292), in a thesis on the technique, accidents, and clinical applications of uretero-pyelography, comes to the following conclusions: (1) Uretero-pyelography is a valuable exploratory method in urology. (2) The injection of opaque fluid should be made with a burette and not with a syringe, so as not to use force on the renal pelvis; small ureteral sounds should be employed so as to allow a return flow to the bladder. (3) Collargol may be used in cases of vesico-renal reflux, but in all other cases solutions of crystals should be employed, and preferably sodium bromide, which is the least toxic. (4) The technique should be as follows: complete radiography of the whole urinary system on a single plate, one picture being made before the fluid is injected and another afterwards; careful lavage of the renal pelvis should then be carried out. (5) The accidents observed in pyelography are due to defects in technique, such as excess of pressure, overdistension, and use of the method in cases where it is contraindicated. (6) Uretero-pyelography is of great help in the diagnosis of ureteral and renal anomalies, vesico-uretero-renal reflux, hydronephrosis, and movable kidney; in the topographical diagnosis of reno-ureteral calculi, hydatid cysts of the kidney opening into the urinary tract, and in the early diagnosis of renal tumours. It is not of much use in the diagnosis of renal tuberculosis, pyonephrosis, chronic pyelonephritis, and least of all in renal cysts. Occasionally it may be of service in other conditions, such as renal or ureteral fistulae, spasm of the muscles of the calices, and so on. (7) Uretero-pyelography should not be employed simultaneously on both sides, and it is contraindicated in cases of great weakness, extreme intoxication, high fever, impaired function of the opposite kidney, acute pyelitis and pyelonephritis, and renal tumours. (8) Uretero-pyelography should be employed more extensively and systematically in clinical medicine, and like ureteral catheterization should form part of the routine examination of the kidneys. It represents one of the most important advances made in modern urology, and has a brilliant future in store.

73. Radium in Epitheliomata of the Tongue.

CL. REGAUD (*Brit. Journ. Radiol.*, October, 1925, p. 361) summarizes the results of four years' experience of the treatment of epithelial cancers of the tongue and floor of the mouth at the Radium Institute of Paris. Of 174 patients 24.1 per cent. remained cured at the end of 1924, while 22.4 per cent. had the tongue lesion healed but not their adenopathy. Nearly one-fourth of all the cases were completely cured and in almost another quarter the lingual lesion alone disappeared. Poor results were obtained from *x* rays, but since these have given good results in cancers of the pharynx Regaud believes that in cancers of the pars dorsalis posterior, in which radium gives but poor results, *x*-ray treatment should be more successful. Some patients suffering from very advanced cancers beyond even local or partial healing may nevertheless be benefited by radium therapy. The aim of treatment should be to distribute numerous weak radio-active foci in the whole cancerized part, using the gamma rays only and giving continuous irradiation for a long time by a single treatment. In the treatment of adenopathies of the neck irradiation by external radio-active foci should be provided by means of protected radio-active tubes placed upon two layers of wax which maintain a uniform 4 cm. skin distance.

74. X-ray Treatment of Local Infections.

F. M. HODGES (*Journ. Amer. Med. Assoc.*, October 24th, 1925, p. 1292) has treated carbuncles, erysipelas, ischio-rectal abscess, chronic parotitis, and other forms of local infection by means of *x* rays. The technique he employed in most cases included a current of 4 milliamperes, a 9-inch spark-gap, an exposure of eight minutes, filtration through 9 mm. of aluminium, and a distance of 9 inches. Half this dose was repeated about the fourth day, and again several days later if necessary. For the first treatment the area included at least one inch of healthy tissue; the later applications were directed towards the central part of the lesions, although this was more likely to produce necrosis. A small incision was made directly any part of the lesion showed signs of softening. In erysipelas and in some carbuncles unfiltered rays were used with a current of 4 milliamperes, a 7-inch spark-gap, and three and a half minutes' exposure at a distance of 10 inches. The most noticeable feature of this treatment was the almost immediate disappearance of pain. The majority of carbuncles, even in very extensive lesions when the inflammation was limited mainly to the skin and subcutaneous tissues, responded very well: in the deep-seated types, when treated after the carbuncle was well developed, the results were almost as good, but in two cases which were treated early no benefit could be traced, and there was probably a delayed breaking down and healing. Hodges states that cases of erysipelas must be treated early, when only a small area of skin is involved and there is no severe constitutional disturbance: he says that he would not attempt to treat a severe advanced case of erysipelas by this method. Chronic parotitis responded equally well to his treatment, but cases require care in selection, since there is some risk of a salivary fistula forming. Hodges believes that moderate doses of *x* rays cause increase in the activity of the cells and in the phagocytic powers of the blood. He suggests that the rapid destruction of the lymphocytes and the action of the rays on other tissues may cause the liberation of a substance that has a marked effect on the inflamed areas and possibly on the infecting organisms.

Obstetrics and Gynaecology.

75. Hydatidiform Mole.

R. BÉGHIN (*Bull. Soc. d'Obstét. et de Gynécol. de Paris*, 1925, No. 9, p. 718) describes two cases admitted to hospital with the diagnosis of placenta praevia; vaginal examination showed commencing cervical dilatation, and it was possible to remove from the uterus characteristic hydatidiform vesicles. After further dilating the cervix under general anaesthesia the mole was removed digitally; curetting with the soft curette followed. The author remarks that although curetting in these cases is fraught with danger of perforating the soft and loaded uterus, there is reason to doubt whether complete digital removal of every part of a hydatidiform mole is practicable. In a third case described a 3-para consulted her doctor because she felt no foetal movements in spite of four months' amenorrhoea. The uterus at this time corresponded to a three months' gestation, and subsequently was noted to have remained stationary in size at several successive monthly examinations. Slight and painless vaginal bleeding occurred during the ninth and tenth months; finally, ten and a half months after the last regular menstruation, a hydatidiform mole was expelled spontaneously after a labour unaccompanied by haemorrhage. This mole had the unusual characters of being surrounded by a translucent non-adherent capsule, containing an intact amniotic sac, without trace of a foetus, and of having undergone mummification with desiccation of the vesicles, which, however, were perfectly preserved.

76. J. VANVERTS (ibid., p. 716) describes the case of a woman, aged 49, whose third child had been born seven years previously, and whose menses were normal and regular until her admission to hospital for three weeks' copious bleeding, thought to be due to myoma. The uterus, of which the fundus reached the umbilicus, was uniformly soft and not tender. The menstrual history, the age of the patient, and the size of the uterus were taken to exclude pregnancy, and softened myoma was suspected. Hysterectomy revealed a large hydatidiform mole. In a second case recourse was had to laparotomy to distinguish between a myoma complicating pregnancy and a vesicular mole. It is noteworthy that a blood-stained peritoneal effusion had disappeared when the abdomen was opened a second time, the mole having been expelled per vaginam in the interval.

77. E. KLEIN (ibid., p. 696) states that the persistence of a hydatidiform mole to the eighth month is extremely rare, and records the case of a primipara, aged 29, who had three months' amenorrhoea followed by irregular bleedings. At the eighth month the onset of labour was accompanied by profuse haemorrhage, and placenta praevia was palpable. It was not until version was attempted under general anaesthesia that it was recognized that a foetus was absent. After removal of the low-lying portion of placenta extensive hydatidiform transformation of the remaining part of the foetal envelope was recognized.

78. Spontaneous Rupture of Ovarian Sarcoma.

H. KOSTER (*Amer. Journ. of Obstet. and Gynecol.*, November, 1925, p. 716) reports a case of spontaneous rupture of sarcoma of both ovaries in a girl aged 14. She had been quite well until about four months before admission to hospital, when a gradually increasing swelling in the left side of the neck was noticed and was treated as a tuberculous gland. Menstruation had been established for nine months and there was no abnormality. For three weeks before admission she had suffered from paroxysmal pain in the lower part of the abdomen, which became acute fourteen hours before admission. The general examination suggested acute appendicitis, which diagnosis was provisionally made. At the operation there was found to be a considerable quantity of blood in the peritoneal cavity, both ovaries were fragmented, and pieces of ovarian tissue were lying free in the cavity. Bilateral ovariotomy and appendicectomy were performed, but while the immediate result was good, yet the patient rapidly became worse, in spite of radiation, and died two months after leaving the hospital. Microscopic examination of the ovarian tissue showed a small round-celled sarcoma. At no time had there been any palpable abdominal tumour.

79. Treatment of Hyperemesis Gravidarum.

J.-L. HENROTAY (*Bruxelles-Médical*, November 29th, 1925, p. 135) holds that the pernicious vomiting of pregnancy is primarily a hysterical manifestation; the secondary symptoms of acidosis are of graver importance, he points out, in pregnant than in other patients. An essential part of the treatment which he has found effective consists in the abandonment of feeding by the mouth until narcotization by rectal administration of chloral hydrate has been secured. For five or six days the patient is completely isolated from her friends and relatives. During the first two days starvation is absolute; the mouth is washed out with an alkaline solution or Vichy water, and evacuation of the bowels is obtained by enemata containing sodium sulphate and senna. During the same period the dehydration and low vascular tension are treated by daily subcutaneous injections of 1 litre of saline solution containing 1 mg. of adrenaline. From the third day onwards the patient is given in the morning a soap and water enema, followed by rectal injection of 6 grams of chloral hydrate suspended in gummy solution. Somnolence being obtained, the patient is given by the mouth, at hourly intervals, first a mixture of milk and Vichy water, then pure milk. In the afternoon a drop-by-drop rectal injection of sodium bicarbonate is given. During convalescence vomiting of small amounts of watery or bilious fluid usually occurs in the afternoon as the effect of the chloral injection passes off. Conversation with the patient must be avoided as far as possible both by the doctor and the nurse. Allusion is made to cases successfully treated on these lines by Couvelaire and by Lorier, and in the present paper Henrotay publishes details of two more cases in which cure was obtained, and one which terminated fatally, no autopsy being permitted. Lorier, it is stated, has increased the dose of chloral hydrate to 8 or 9 grams.

80. Treatment of Dysmenorrhoea.

E. KLAUS (*Therapeutic Gazette*, November 15th, 1925, p. 779) states that while the symptoms of dysmenorrhoea sometimes require very radical measures, yet palliative treatment by narcotics is often all that is required. The difficulty of this lies in the facility with which these patients acquire the drug habit. He reports seven cases of spasmodic dysmenorrhoea in which the symptoms were controlled by the administration of chloretone. His usual practice was to give 5 grains two or three times daily for a week before the period. In six cases this was only necessary for a few months, after which the patient appeared cured; in the other case the treatment had to be discontinued owing to the hypnotic and depressing effect of the drug. He found chloretone comparatively non-toxic in this dosage, and that if necessary the dose could safely be increased. In his opinion there is very little risk of habit formation, and chloretone can be given to patients who would not be safe with other hypnotics.

81. Full-term Ectopic Gestation.

P. S. MILLS (*Indian Med. Gazette*, November, 1925, p. 510) reports a case of extrauterine gestation going to full term in which the mother and child both survived. A primipara, aged 20, was admitted to hospital having been in labour for three days. It was found that the foetus occupied a transverse position with the head to the right, and it was not more easily felt than normally. The other parts of the foetus could not be distinguished; foetal heart sounds could not be heard, but weak movements were felt. Abdominal examination revealed nothing to suggest ectopic gestation. There was a thick reddish-brown vaginal discharge unlike that of labour, and on digital examination the cervix was found to admit two fingers; the uterus was about twice the size of the non-pregnant uterus and was lying somewhat to the right of the normal. A diagnosis of ectopic gestation was made. Laparotomy was performed and the foetus was found to be lying in a thin sac in the left broad ligament. There were no adhesions and a living female child was extracted, the pedicle tied, and the sac with the placenta was removed. The left ovary was healthy and there was no enlargement suggestive of a corpus luteum in the right ovary; thus there was no evidence of external migration of the ovum. The mother developed an abscess in the cellular tissue of the left side, but this was drained through the vagina, and she later made an uninterrupted recovery.

82. Absorption from the Vagina.

A. LOESER (*Zentralbl. f. Gynäk.*, December 12th, 1925, p. 2824) mentions salicin, antipyrin, salol, and resorcin as substances which can be absorbed from the human vagina, and cocaine and paraldehyde as substances which are not absorbed if the epithelium be intact. Toxic symptoms are shown after prolonged vaginal applications of ether or alcohol, and a transitory glycosuria follows insertion of phloridzin. The most quickly absorbed substances are mercuric chloride and iodine. Loeser has tested the rate of absorption of the latter in twenty patients by occluding the cervix with a waxed tampon and inserting in the posterior fornix a pessary containing 1 to 2 grams of potassium iodide and twice that weight of cocoa-butter; the urine was then tested for iodine at intervals of five minutes. He finds that healthy women,

aged 20 to 30, show signs of the absorption of iodine in from twenty to thirty minutes; this time becomes longer towards the climacteric. Absorption was also slower in three patients with colpitis, and became normal after cure of the morbid vaginal condition. In a group of nine patients with leucorrhoea of a non-purulent ("cervical") character, ascribed to functional disorders, absorption was notably slow.

Pathology.

83. The Production of Ozaena.

G. BLANC and G. PANGALOS (*C. R. Soc. de Biologie*, November 27th, 1925, pp. 1267 and 1268) have failed to substantiate Perez's claim that the bacillus of ozaena is characterized by a definite selective ability, which enables it even after intravenous inoculation to settle in the nose and to give rise to disease. On the contrary, they find that neither with the *B. ozaenae* nor with the *B. ozogenes* (a coliform bacillus recently described by the present authors) is any disease set up in the nose by intravenous, intraperitoneal, or subcutaneous injection in rabbits. Neither the direct inoculation of the organisms on to the nasal mucosa nor washings from the nose of patients suffering from ozaena gave rise to disease, unless preceded by artificial irritation of the membrane with croton oil. The same failure was observed similarly in the case of children. Inoculation of a young man suffering from leprosy, and showing a marked atrophy of the inferior turbinate, proved successful. One month after the inoculation with *B. ozogenes* there was a whitish membrane covering the inferior turbinate and the surface of the septum. A fetid odour was present, and cultures of the nasal secretion yielded *B. ozogenes*. The authors therefore agree with Leroux-Robert that infection with *B. ozaenae* is a secondary phenomenon occurring only in those who are subjects of atrophic rhinitis and who are specially predisposed to attack by this organism.

84. High Protein Diet and Renal Function.

OWING to the conflicting nature of the evidence concerning the effect of high protein intake on the kidneys of laboratory animals and man, A. J. MILLER (*Journ. Exper. Med.*, December, 1925, p. 837) has undertaken a series of experiments on rats. Seven groups of rats were fed on diets containing protein that varied in amount from 1.36 to 40.13 per cent. of the total dietary, which included grain, casein, meat, and milk; carbohydrates, fat, and vitamins were also provided. From a number of animals one kidney was removed so as to double the work of the remaining one. After a period varying from nine weeks to six months estimations were made of the blood, uric acid, and the blood urea. The animals were then killed and their kidneys examined microscopically. In Group 1, which received only 1.36 per cent. of protein, the animals were markedly emaciated. In the groups receiving from 28.76 to 40.13 per cent. of protein there was definite hypertrophy of the kidneys. The nephrectomized animals that were fed on a high protein dietary showed great hypertrophy of the remaining kidney, amounting in weight to an increase of 85 per cent. over the controls. Chemical estimations revealed no evidence of renal disturbance. From these experiments the author concludes that there is no evidence of kidney damage resulting from a high protein diet. This is in accordance with observations made on human beings, notably on the Eskimos, and on explorers in the Arctic regions who have lived for several months at a time on an exclusively meat dietary. Miller adds that this conclusion must not be held to justify the administration of large amounts of protein to patients with nephritis; it is rational to relieve diseased kidneys of as much work as possible.

85. The Mechanism of Infection in Anthrax.

L. MÜLLER (*C. R. Soc. de Biologie*, November 20th, 1925, p. 1243) relates how, some years ago, he inoculated the interior of a pigeon's egg with virulent anthrax bacilli, sealed up the opening with Canada balsam, and introduced the egg into the peritoneal cavity of a rabbit. The animal died in five weeks of generalized anthrax. Recently this experiment led him to doubt the truth of Besredka's hypothesis that the skin is the only susceptible part of the body to anthrax, and that it is only when the skin is contaminated that infection can occur. In his original experiment the bacilli must have passed through the egg and given rise to a primary peritoneal infection without any involvement of the skin. He now describes a new series of experiments. He found that if the bacilli were introduced into a filter and the filter immersed in broth they eventually grew through the pores of the candle; with an L1 candle the time required for this was six to eight days, and with an L2 candle about three weeks. He therefore inoculated several candles with anthrax bacilli, sealed the ends very carefully, and introduced them intraperitoneally into rabbits. Of 9 rabbits treated thus 7 died in a period varying from six to fifty-one days. After death the skin was found to have healed perfectly, and the candles were surrounded by a sac of omentum. Large numbers of bacilli were found in the spleen, and pure cultures were obtained in each case. He considers it certain that in these experiments the infection must have occurred altogether independently of the skin, and that Besredka's hypothesis cannot be considered correct.

86. The Differential Blood Count in Hodgkin's Disease.

M. KRMPOTIC (*Lijecnicki Vjesnik*, November, 1925, p. 699) states that neutrophile leucocytosis with eosinophilia is considered to be typical of lymphogranulomatosis, or Hodgkin's disease, but his own experience of ten cases in the last three years indicates that there is no characteristic blood picture in Hodgkin's disease, as the differential count often resembles that of lymphosarcomatosis and of tuberculous or syphilitic granulomata. In lymphosarcoma the leucocyte count may vary from normal to 120,000 white corpuscles, which was recorded by Reinbach in a case of cervical lymphosarcoma, in which the eosinophiles amounted to 48.28 per cent. Lincoln found in one case an eosinophilia varying between 63 and 68.2 per cent. In the majority of cases of Hodgkin's disease there is a moderate polymorphonuclear neutrophile leucocytosis, but in 20 per cent. of these cases there is leucopenia. In 20 per cent. the differential count is normal, but in others lymphocytosis occurs, which may be transient or variable. In 25 per cent. of these cases there is eosinophilia, usually of moderate degree; myelocytes are common in the higher degrees of leucocytosis. The author adds that a single differential count is of little use in diagnosis, but repeated examinations will usually show a more or less characteristic blood picture.

87. Pulmonary Malignancy following Tar Applications to the Skin.

T. B. MURPHY and E. STURM (*Journ. Exper. Med.*, November, 1925, p. 693) report that mice in which skin cancer did not develop after tar applications were found to have growth in the lungs. It was at first thought that these were pulmonary metastases from skin growths which had healed or sloughed away, but in spite of the most careful examinations, both during life and after death, no cancerous lesions could be found in the skin. Further, the cells of the lung growth were quite different in type from those found in metastases from skin lesions. Although spontaneous tumours have often been observed in the lungs of mice, yet they do not occur generally in young mice, nor with such frequency as in the experiments with tar cancer. To throw light on this problem a number of separate skin areas in mice were treated with tar, but not for so long as to cause skin lesions. The incidence of lung neoplasms was 60 per cent. in one series of experiments and 78.3 in another. Spontaneous pulmonary tumours, even in a stock of mice specially prone to this disease, never exceeded 5.5 per cent., while the average was 1 to 2 per cent. over a period of several years. The experimentally produced neoplasms, however, closely resembled the spontaneous kind. The authors dismiss the suggestion that the pulmonary neoplasms are due to the carriage of tar particles to the lungs by the lymphatics, and state that they have definite evidence that painting with tar reduces resistance to transplanted cancer. They believe that the localization in the lungs was determined by pulmonary irritation due to sawdust particles in the respired air.

88. Antibodies in Tuberculous Pleural Fluids.

M. SALOMON and J. VALTIS (*C. R. Soc. de Biologie*, November 13th, 1925, p. 1145) have examined the blood serum and the pleural fluid of 14 patients suffering from unilateral pulmonary tuberculosis on whom artificial pneumothorax had been performed. Search was made in both fluids for the specific antibody and antigen, the complement fixation test being employed. In 11 of the patients the titre of antibody was the same in the blood serum as in the pleural fluid; in 2 others it was slightly higher in the serum; and in the last antibody was absent in both fluids. In 13 of the patients antigen was found present in considerable quantity. The authors then examined the pleural fluid and serum of 5 patients suffering from spontaneous tuberculous pleurisy. In 3 of them antibody was found, but in none of them was any trace of antigen present. These limited observations indicate that in the pleural fluid associated with artificial pneumothorax both the tuberculous antibody and antigen are present, whereas in the fluid of spontaneous cases of tuberculous pleurisy antibody is generally present, but antigen is absent. The authors seem to think that these differences can be explained by the fact that in the fluid of artificial pneumothorax tubercle bacilli are present in far greater numbers than in the fluid of spontaneous pleurisies.

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

89. High Blood Pressure.

R. D. RUDOLF (*Canadian Med. Assoc. Journ.*, November, 1925, p. 1093) classifies the varieties of hyperpiesis for practical purposes under the headings of nervous, toxic, and organic; into one of these categories all cases may be placed when considering treatment. In nervous hyperpiesis the blood pressure is principally influenced by the emotions, most forms of nervous tension tending to its increase either by intensifying the cardiac action or by causing vaso-constriction, or by both, with possibly an increased adrenal internal secretion. Starling believes that the vasomotor centre automatically raises the blood pressure to meet its own needs. In toxic hyperpiesis various toxins arising from metabolism, such as guanidin, accumulate and raise the blood pressure, while in intestinal disturbances toxins of the pressor type may be produced and absorbed. In organic hyperpiesis very slight interference with the circulation in some vital centre may cause a compensatory rise in pressure, though true arterio-sclerosis must be widespread before a rise occurs, a considerable amount of obstruction to the general circulation being necessary to raise the pressure. Treatment involves considerations of environment, diet, and specific and symptomatic therapy. Rest, both bodily and mental, and freedom from worry are important, and general restriction of the total diet is often necessary. A milk and vegetable diet, with avoidance of purine-containing foods, and with alcohol and tobacco in moderation, suit these cases best, and the bowels should be regulated with salines and an occasional mercurial pill. An attempt should be made to remove the underlying cause, but Rudolf considers that those patients without symptoms in whom the pressure does not lessen under dieting and rest are best left alone. When, however, symptoms are present, free purgation and diuresis may be beneficial, and the benefit derived from timely venesection in urgent cases is emphasized.

90. Scarlet Fever.

H. ALDERSHOFF (*Nederl. Tijdschr. v. Geneesk.*, December 12th, 1925, p. 2694), director of the Dutch Serological Institute at Utrecht, summarizes the recent investigations in scarlet fever as follows: The Dick reaction is of considerable assistance in the diagnosis of scarlet fever. If employed judiciously it is a means of distinguishing persons who are susceptible to scarlet fever from those who are not. Antitoxic scarlet fever serum, if used early in the disease, serves to prevent complications. It is not very effective when the rash has faded, and has no influence on late complications. In mild and moderately severe cases the injection of antitoxin can be given intramuscularly, but in severe cases large doses should be given intravenously. The risk of serum sickness can be considerably reduced by the use of refined dealbuminized serum. During a severe epidemic active immunization by injection of scarlet fever toxin is advisable.

91. Polyneuritis following Wound Diphtheria.

REINHOLD (*Deut. med. Woch.*, December 11th, 1925, p. 2064), who records two illustrative cases, states that Leppmann and Röper showed that a considerable number of cases of so-called polyneuritis following infected wounds were really examples of wound diphtheria, the clinical picture being that of post-diphtheritic paralysis. He finds that, as a general rule, paralysis and cardiac disturbance are less frequent after wound diphtheria than after diphtheria of the fauces, a fact which must be attributed to the slight degree of absorption from granulation tissue. Reinhold has not seen any convincing evidence of the benefit of injections of antitoxic serum in the few cases of diphtheritic paralysis in which he has employed this method. According to pharmacological experiments it is probable that diphtheria antitoxin has as little effect as tetanus antitoxin or toxin which has been taken up by the nervous system, and a protective action only can be expected against absorption of fresh toxin. On the other hand, Reinhold has long been an advocate of injections of strychnine for diphtheritic paralysis. His first case was that of a soldier, aged 21, who, after wounds of both legs, complicated by furunculosis, developed all the signs of diphtheritic paralysis, including difficulty in swallowing, dimness of vision, weakness of the arms and legs, and loss of knee-jerks. The second case was that of a woman, aged 68, who, after an operation for cholecystitis, developed diphtheria of the wound, which was treated by antitoxin. Six weeks later palatal and ciliary paralysis occurred, followed by loss of knee-jerks. There was no paralysis of the abdominal muscles. Improvement followed the injection of strychnine and digitalin, contrary to the experience of Walshe, who maintains that paralysis of the palate occurs only after faucial diphtheria; in neither case was there any faucial involvement.

92. Diagnosis of Early Apical Tuberculosis.

D. MAESTRINI (*Il Policlinico*, November 16th, 1925, p. 1593) reports that in early apical tuberculosis he has found present an area of tenderness on moderate pressure over the fossa supraclavicularis minor between the heads of the sterno-mastoid. He considers this indicative of disease of the corresponding apex of the lung; it was not present in disease of the middle or lower lobe. The author reports five cases where his sign was present and the existence of disease was confirmed by radiological and other examination. It was present in the very earliest stages, and was, he thinks, of reflex origin, associated with the sympathetic system and the cervical plexus. He refers to Head's work in this connexion, but states that this particular localization is not described by Head. Photographs showing the exact spot are included in the paper.

93. Progressive Atrophy of the Salivary Glands.

H. GOUGEROT (*Bull. de Derm. et de Syph.*, November 8th, 1925, p. 376) records three cases of progressive atrophy of the salivary, parotid, and submaxillary glands, causing complete dryness of the mouth with secondary trophic troubles. All the patients were women and treatment was ineffective. The etiology is obscure, but in one case congenital syphilis was present. The author suggests that it may be a specific disease, starting in the mouth, but capable of spreading to the conjunctiva, larynx, nasal fossae, and the vulva. Various kinds of treatment were tried without success, and the prognosis is bad.

Surgery.

94. Treatment of Obstructive Jaundice.

J. P. BOWLER (*Boston Med. and Surg. Journ.*, December 3rd, 1925, p. 1045) discusses the treatment of obstructive jaundice as a factor affecting surgical risk. Hepatic insufficiency, uraemia from a toxic nephritis, and haemorrhage from a lack of available calcium are the chief fatal complications in operations for obstructive jaundice, and require pre-operative treatment. By animal experiments and from a study of the part played by the liver in carbohydrate metabolism it has been shown that jaundiced patients should be given large quantities of carbohydrates. A 15 per cent. glucose solution may be administered rectally by the Murphy drip and the patient be encouraged to eat reasonable amounts of sugar. The presence of a toxic nephritis which has developed during the course of obstructive jaundice is disclosed after the operation by a sudden cessation of the drainage of bile accompanied by a steadily increasing albuminuria and the presence of casts. The jaundice gradually deepens and the coagulation time increases; treatment is necessary for uraemia and the maintenance of free biliary drainage. The most frequent post-operative complication is secondary haemorrhage due to a lack of available calcium, as shown by examination of the coagulation time of the blood. Treatment consists in the administration of calcium, either orally as calcium lactate 100 grains a day for three days, or as calcium chloride by slow intravenous injection in 5 c.cm. doses of a 10 per cent. solution for three successive days. Since there is frequently an accompanying infection a larger fluid intake should be encouraged. Bowler advises that these patients should receive 4,000 c.cm. of fluid every twenty-four hours for three or four days before the operation, by which time the coagulation period should have been reduced to normal and a more satisfactory surgical risk established.

95. Gastroptosis.

V. MATTEI (*Il Morgagni*, November 25th, 1925, p. 1377) points out that gastroptosis occurs in the hypotonic and atonic stomach. In ptosis the volume of the stomach is very slightly altered; in dilatation there is an increase. Mattei believes that duodenal ptosis is more common than is generally believed, and enteroptosis may be the cause of some of the various colics, constipation, and uneasy sensations. He refers

to De Giovanni's views on the relation between the morphological type of body of the patient and his gastric signs and symptoms, and points out how much more common these ptoses are in the asthenic type; these patients are usually poorly nourished, and have weak muscles, sharp costal angles, sloping ribs, small cold feet and hands, delicate skin with poor growth of hair, increased tendon reflexes, a tendency to mental depression, and occasionally a "floating" tenth rib. As regards treatment, some form of abdominal support is often useful; it should be applied before rising from bed. Food should be light and easily digested, and solids and liquids should be taken together. The emptying of the stomach may be aided by posture and its walls strengthened by strychnine; the general nervous system is improved by suitable tonics, fattening when necessary, regulation of the bowels, raising the foot of the bed, and in some cases prolonged rest in bed. Operation is only advisable in severe cases, since cure is not often obtained and secondary ailments sometimes follow.

96. Foreign Bodies in the Bronchi.

J. BIJTEL (*Nederl. Tijdschr. v. Geneesk.*, October 24th, 1925, p. 1888) states that before laryngoscopy was introduced into current practice in 1866 the mortality from foreign bodies in the respiratory tract was 41.2 per cent. for all cases and 28.2 per cent. for those which received treatment (Preobraschensky). Between 1866 and 1893, when laryngoscopy was generally employed but not bronchoscopy, the mortality for all cases was 30 per cent. and 19.4 per cent. for treated cases (Pohl). Among cases treated by bronchoscopy von Eichen in 1908 reported a mortality of 13.1 per cent. among 305 cases, and Kahler in 1911 a mortality of 9.6 per cent. among 291 cases. Bijtel has collected statistics of 504 cases from the oto-rhino-laryngological clinic at Amsterdam for the period 1908 to 1925, the surgical and laryngological clinics at Groningen from 1907 to 1924, and the bronchoscopic clinic of Chevalier Jackson at Philadelphia as described in Huizinga's Groningen thesis. Of the 504 cases 27 were fatal—a mortality of 5.3 per cent. The cases in Bijtel's series were divided into the following four groups. (1) In organic foreign bodies: 234 cases, with a mortality of 4.3 per cent. (2) Animal foreign bodies: 45 cases, with a mortality of 13 per cent. (3) Vegetable foreign bodies excluding Brazil nuts: 120 cases, with a mortality of 5.8 per cent. (4) Brazil nuts: 106 cases, with a mortality of 3.8 per cent. The causes of death were in most cases pneumonia, purulent bronchitis, and pulmonary abscess, in two cases cardiac failure, and in one case each pyopneumothorax, mediastinal emphysema, pulmonary haemorrhage, and haemorrhagic bronchitis.

97. Blood Transfusion in Post-operative Collapse.

AUMONT (*Bull. et Mém. Soc. Nat. de Chir.*, December 5th, 1925, p. 1008) records the case of a young girl operated on for acute appendicitis. The operation, though somewhat difficult, was successful, and the patient made satisfactory progress with no complications till the tenth day. The temperature then rose and there was marked headache, with later collapse and some gastro-enteritis. The temperature and pulse rate were both increased and the diagnosis remained in doubt as there were no abdominal or other signs present to account for the condition. Blood transfusion was performed, 400 c.cm. of citrated blood being given to the patient. A few hours later she began to improve and after a good night her condition was rapidly restored to the normal; the subsequent history was uneventful. Aumont considers that the abdominal symptoms, marked asthenia, and low blood pressure were probably due to some disturbance of the endocrine system, possibly originating in the suprarenal bodies. There was no doubt that the recovery was due to the blood transfusion, and this line of treatment may be useful in similar conditions of acute toxaemia.

98. Periarterial Sympathectomy.

N. J. GUREWITSCH (*Zentralbl. f. Chir.*, November 14th, 1925, p. 2581) states that the general adoption of the Jaboulay-Leriche-Brüning method of periarterial sympathectomy has revealed two serious dangers: (1) laceration of the arterial wall, and (2) stenosis of the artery by contraction of the scar tissue. These complications have been recorded by several observers, and Gurewitsch has endeavoured to find a method of minimizing these dangers. After removing 6 to 8 cm. of the adventitia of the femoral artery in dogs he excised strips of the fascia lata from the same animals, and fixed these strips with fine catgut over the denuded femoral arteries. The operation wounds were firmly sutured. At periods of from two to five weeks the arteries with their surrounding tissues were excised and examined histologically. No signs of narrowing of the arterial lumen or of thrombosis were found at any period, and at the end of five weeks the fascia was firmly united to the arterial walls. The author has treated two cases of progressive dry gangrene of the toes, in old men, by Leriche's operation, modified as described above. Primary union occurred in both cases, followed by rapid separation of the necrotic tissues.

Therapeutics.

99. Treatment of Asthma.

L. HOFBAUER (*Wien. klin. Woch.*, December 3rd, 1925, p. 1311) agrees that in the curative treatment of asthmatic attacks adrenaline injections are very valuable. There may, however, sometimes be such unpleasant symptoms as faintness, pallor, and nausea, while with long-continued use there is the risk of arterio-sclerosis. Adrenaline is less harmful in combination with pituitary extract, but this also must not be kept up for long. The author thinks that theobromin preparations are much safer and probably as good. Diuretin-calcium, taken once or twice in the evening, is recommended as an almost certain preventive of an attack. The better known iodine derivatives of theobromin are depressant and have been said to induce Graves's disease. Tuberculin treatment acts by virtue of its foreign protein content. Hofbauer thinks that the desensitizing theory does not hold good in the great majority of asthma cases, and that the elaborate quest for specific irritants is inadvisable. He adds that the dangers attending resection of the vagus or the sympathetic much outweigh the possible benefits of such operations.

100. Intravenous Iodine in Influenza.

C. P. V. SHUNKER (*Indian Med. Gazette*, November, 1925, p. 513) has investigated the use of iodine intravenously during an epidemic of acute catarrhal influenza in a prison. He applied this treatment in patients who had high fever with delirium and prostration, or had developed severe pulmonary complications. His initial dose was 20 minims of a solution containing iodine 1 drachm, potassium iodide 1 drachm, distilled water 42 drachms; this was added to 10 c.cm. of saline solution for intravenous injection. Shunker found that within twenty-four hours after injection most of his patients passed from a condition of anxiety and distress into comparative comfort. If within forty-eight hours of the first injection the temperature and general condition did not improve a second dose of 40 minims of the solution in 10 c.cm. of saline were administered: one patient required as much as five injections. The majority of the patients required only one injection; no bad results followed, and the benefit was usually very rapid.

101. Hexyl Resorcinol as a Urinary Antiseptic.

V. LEONARD and A. WOOD (*Journ. Amer. Med. Assoc.*, December 12th, 1925, p. 1855) have continued their investigation of hexyl resorcinol (see *Epitome*, 1925, vol. i, paras. 146 and 240) with special reference to its acting equally well in acid and alkaline urines, which is explained in terms of surface tension. They remark that the rate of diffusion of a germicide through the cell membranes of the renal tissue is dependent on the surface tension of the fluid, and by experimental work *in vitro* they have proved that hexyl resorcinol is more effective in a solution of low surface tension. Moreover, this drug itself greatly lowers the surface tension of a solution. They have found that the surface tension of normal urine is about 60 "dynes" (ordinary water 77 dynes), that the administration of hexyl resorcinol in therapeutic doses lowers the surface tension to about 50 dynes, and that the administration of sodium bicarbonate in therapeutic doses raises the surface tension to 66 dynes and over, which explains why it has long been contraindicated in hexyl resorcinol treatment. Free intake of water may raise the surface tension of urine by as much as 15 to 20 dynes. Leonard and Wood have now given hexyl resorcinol in 500 cases of urinary infection with considerable success. They used gelatin capsules containing a 25 per cent. solution in olive oil, equivalent to 0.15 gram hexyl resorcinol; for children the strength was 2.5 per cent., one drachm containing 0.1 gram of the drug. The dosage was, for adults, 0.45 to 0.6 gram thrice daily immediately after meals; for children a relatively larger dose was given. Fluids were not increased and sodium bicarbonate was not given. The authors found that this treatment must be prolonged for considerable periods amounting to sixty to ninety days in the case of *B. coli* infection, which is the most resistant to surface tension changes in the urine. They state that if combined with the usual local measures the length of treatment is shortened and the percentage of successes increased. No toxic effects were observed.

102. Intravenous Administration of Digitalin.

J. SURMONT and A. SCHFDROWITZKY (*Presse Méd.*, December 2nd, 1925, p. 1590), while strongly recommending the intravenous administration of digitalin, add that the indications for it are rather exceptional, and that the drug must be very pure. It has been maintained that digitalin by the mouth acts as well, but this is unlikely in view of the fact that cardiac failure entails hepatic insufficiency, which in turn hinders absorption from the alimentary canal. Ouabain has also been recommended for intravenous administration, but the authors have observed a number of cases in which after ouabain treatment had been tried without benefit the patients made undeniable progress when treated with digitalis. They think that if some form of reactivation is concerned it is a reactivation due to a better method of administration, not to co-operation of the two drugs. Details are given of a man with mitral and aortic disease, asystole, and many grave symptoms, who after eight years' illness—marked by temporary remissions under ordinary treatment, including digitalin and theobromine by the mouth, when at home—came into hospital. There, after digitalin by the mouth and intravenous injections of ouabain had failed, digitalin was given intravenously with such dramatic results that in three months the patient returned to work.

103. Treatment of Syphilis.

W. H. GOECKERMAN (*Minnesota Med.*, December 2nd, 1925, p. 740), in a review of recent advances in the therapeutics of syphilis, states that although the supremacy of the arsenobenzols remains unshaken, yet when they fail certain other remedies may be successful. The toxicity of bismuth has been reduced by combinations with other elements, but many of these preparations have little therapeutic value. The author uses sodium potassium bismuth tartrate almost exclusively, giving 0.2 gram intramuscularly about every fifth day. If well borne, twenty doses are given in each course. Although slower in action than the arsenobenzols, bismuth is valuable when these or mercury are not tolerated. Apparently the immediate action of bismuth is superior to that of mercury, but it fails to reduce the induration of chancres or of lymph-adenitis. Its influence on syphilides is slower than that of the arsenobenzols, and it does not produce a focal reaction. Its effect on the Wassermann reaction is slower but probably more lasting than that of other remedies. Bismuth has been found repeatedly in the cerebro-spinal fluid, which supports the claim that it is particularly useful in neuro-syphilis. It produces very few complications. Gingivitis and stomatitis appear to be due to neglect of oral hygiene, transient albuminuria is frequent, and the author has never seen dermatitis nor evidence of cumulative action. Sulpharsphenamine is probably less toxic than novarsenobenzol and may be given subcutaneously, intramuscularly, or intravenously in doses of 0.4 gram every five days, a 30 to 40 per cent. solution being best. Spirochaetes disappear from a chancre in seven to ten hours after the first injection; little or no local pain occurs, and chancres heal in from seven to ten days. The author gives three doses of 0.4 gram every third day, then every fifth day. After the third dose mercurial inunction is commenced and continued for six weeks, when a second course of sulpharsphenamine is commenced; four such courses complete the treatment. Intravenous injection is only required when intramuscular administration is painful. It may produce dermatitis, purpura haemorrhagica, or aplastic anaemia, even without intensive dosage. Tryparsamide has a marked action on the Wassermann reactions in blood and cerebro-spinal fluid, but it appears that relapses are more frequent than with the arsenobenzols, to which it is inferior in latent and tertiary syphilis. It has been found valuable in some cases of neuro-syphilis after a previous systematic arsenobenzol treatment, but may be followed by retrobulbar neuritis. By malaria treatment the author has obtained satisfactory remissions in more than 50 per cent. of his cases. It has been effectual in cases of neuro-syphilis without paresis; the Wassermann reaction of the cerebro-spinal fluid has become negative, while tabetic lightning-pains and optic atrophy have been relieved.

Anaesthetics.

104. Blood Pressure in Anaesthesia.

M. A. MORTENSEN (*Anaesthesia and Analgesia*, December, 1925, p. 333) advocates a careful study of the blood pressure before and during any operation and until convalescence is established as the best means of estimating the cardiac efficiency and anaesthetic risk. By means of a tilting table blood pressure and pulse changes were observed during passive postural changes of the body, the change from the reclining to the erect position being obtained without any effort on the part of the patient. Comparisons with patients with symptoms of myocardial inefficiency showed a more pronounced drop in the systolic pressure and an abnormally increased pulse rate than in healthy persons, thus affording positive evidence of cardiac weakness. In ninety healthy girls the average systolic pressure was 118, the diastolic 72, and the pulse rate 72 when reclining, while in the erect posture the readings were 114, 80, and 86 respectively. Only rarely was a drop in diastolic pressure noted on putting the patient in the erect posture, and this occurred in those who were prone to fainting attacks. During operations lowering of the blood pressure is the earliest sign of collapse and shock, and it occurs before any other sign of danger. Mortensen therefore advises routine estimation of the blood pressure at five to ten minute intervals. In unfavourable cases the degree of anaesthesia may be altered, or the chest be rubbed with cold compresses to stimulate respiration; in more precarious conditions the slow continuous intravenous injection of Ringer's solution is suggested. After an operation regular estimations reveal the condition of the myocardium, maintenance of blood pressure at the pre-operation level being indicative of sustained cardiac efficiency, while a drop of many millimetres calls for cardiac treatment. Occasionally an increase in pressure is accompanied by alarming symptoms, and a case is mentioned in which the systolic pressure rose from 140 to 200 mm. in consequence of a progressive thrombosis in the ascending vena cava ten days after gastro-enterostomy. Mortensen concludes that careful readings and their correct interpretation are of more value to the anaesthetist and surgeon than any other procedure in affording early detection of a failing myocardium.

105. Anaesthesia in Rectal Operations.

G. M. LINTHICUM (*Amer. Journ. Surg.*, December, 1925, p. 300), in a comparative study of anaesthesia in various rectal operations, concludes that local anaesthetics are preferable to general ones, although he agrees that spinal analgesia is more dangerous than chloroform. He believes, however, that many of the failures and complications of local anaesthesia are due to the administrator rather than to the agent. Sacral or intraspinal anaesthesia is inadvisable when there is any adjacent local infection, and in operations for fistula it is of doubtful value, since the extent of the disease is uncertain and extensive exploration may be necessary. In haemorrhoids and rectal carcinoma the value of sacral anaesthesia is being increasingly recognized, and Lepoutre, after dealing with 500 cases, believes that spinal anaesthesia is indicated in all subumbilical operations. Trans-sacral anaesthesia has been used satisfactorily in low carcinoma, haemorrhoidectomy, and amputations of the rectum, but Linthicum recognizes the difficulty of the method and does not recommend it. Parasacral anaesthesia was used by Staffel in 413 perineal and pelvic operations; he considers it safer and more certain than the lumbar method. For patients with cardiac, respiratory, or renal changes, contra-indicating general ether anaesthesia, but requiring some degree of unconsciousness, Linthicum recommends a gas-oxygen mixture or ethylene.

106. Synergy in Anaesthesia.

J. T. GWATHMEY (*Journ. Amer. Med. Assoc.*, November 7th, 1925, p. 1482) discusses the discovery and development of synergistic analgesia produced by magnesium sulphate and morphine and magnesium sulphate and ether. He describes experiments conducted in collaboration with C. W. Hooper in which they found that the intravenous administration of less than one-half the anaesthetic dose of magnesium sulphate combined with approximately one-ninth the anaesthetic dose of ether produced surgical anaesthesia, and conclude that ether and magnesium sulphate act synergistically without producing any increase in toxicity. Gwathmey states that in the albino rat the addition of 2.5 per cent. procain to 50 per cent. magnesium sulphate, alone or combined with 1/8 grain of morphine for subcutaneous injection, definitely prolongs the effect, and allays irritation without increasing toxicity. He suggests that the combination of 50 per cent. magnesium sulphate with 2.5 per cent. procain may be a good substitute for morphine in general practice. Gwathmey further describes experiments on rats in which it was found that those previously injected intravenously with 0.8 c.cm. per kilogram of a 50 per cent. magnesium sulphate solution containing 2.5 per cent. procain and 1/8 grain morphine per 2 c.cm. survived ether anaesthesia for twenty to twenty-five minutes, while animals which had not received this preliminary treatment died within from eight to ten minutes. From this Gwathmey and Hooper conclude that the use of synergistic drugs with ether anaesthesia may result in a considerable saving of life.

Obstetrics and Gynaecology.

107. Cystic Corpus Luteum.

ACCORDING to R. KELLER (*Gynécol. et Obstét.*, December, 1925, p. 288), cysts of the corpus luteum are found in many gynaecological affections; they are not more frequent in ectopic pregnancy than in other conditions. Inflammation and adhesions of the pelvic peritoneum seem to have no share in their formation, and adhesions over them are often not the remains of peritonitis, but of chronic congestion of the pelvic organs. In most cysts the lutein elements are found in a state of retrogression. Some patients complain of pain over the lower abdomen, but this is due to some concomitant affection and not to the cyst. Large cysts, which are rare, may cause symptoms by giving rise to torsion or incarceration. In most cases the menstrual flow was more abundant than normal and sometimes associated with pain, though without change in periodicity.

108. Muscular Attachment of the Cervix.

F. G. DUBOSE (*Surg., Gynecol. and Obstet.*, December, 1925, p. 834) calls attention to the presence of certain muscle fibres inserted into the anterior portion of the cervix uteri which, he states, are analogous to the prostatic fibres of the levator ani muscle in the male. These uterine fibres arise from the pubis and pass backwards along the sides of the vagina over the anterior vaginal fornix and anterior surface of the cervix to be inserted into the anterior surface of the cervix at the isthmus. The fibres of the two sides fuse to form a strong medium aponeurotic band. On either side of this band the tissue is loose, but the band itself is dense and firmly adherent, attaching the base of the bladder to the cervix. The author adds that the function of this muscle is to form a sling for the cervix uteri on its anterior surface when the uterus is normally anteverted. It is separated with difficulty by blunt dissection and in the operation of hysterectomy is usually cut by scissors in the process of separating the cervix from the bladder.

109. Pregnancy in Apparent Absence of Adnexa.

RUDAUX and DURANTE (*Bull. Soc. d'Obstét. et de Gynécol. de Paris*, 1925, No. 9, p. 639) record the case of a woman, aged 32, who died of eclampsia shortly after delivery at term. At the necropsy the adnexa of both sides appeared to be absent. Four years earlier the right Fallopian tube and ovary had been removed for ectopic pregnancy. Microscopical examination of the uterus removed *post mortem* showed on the left side an atrophic Fallopian tube and a corpus luteum surrounded by rudimentary ovarian tissue. They were embedded in loose connective tissue in a small groove in the myometrium, nearer the upper than the lower limit of the uterus, and were covered by peritoneum of normal appearance. No broad ligament was present on the left side. The authors add that this case is of interest in that it casts doubt on cases of unilateral or bilateral absence of the adnexa recorded in the absence of microscopical examination; the occurrence of a similar anomaly may explain the occasional persistence of menstruation after bilateral castration.

110. Treatment of Gonorrhoeal Endocervicitis.

L. BRADY (*Bull. Johns Hopkins Hosp.*, December, 1925, p. 400) records results obtained in 36 cases of gonorrhoeal endocervicitis treated by mercurochrome. The criterion of cure was three successive negative smears at two-week intervals and a further negative smear at the end of a month after the completion of all treatment, by which time, in the great majority of cases, all discharge had ceased. The patients were douched daily except during menstruation and on the days when the smears were taken. Twice a week the vaginal portion of the cervix was painted with a 20 per cent. mercurochrome solution, and, using a thin wire applicator, the entire cervical canal was swabbed up to the internal os. In 4 cases a profuse leucorrhoea with negative smears entirely cleared up in six weeks, and of the remaining 32 cases with positive smears 25 were certainly, and 4 probably, cured, while 3 failed. The 4 probable cures had three successive negative smears and had no vaginal discharge at the end of treatment, but the fourth smear at the end of the month could not be obtained. The three patients in whom the treatment failed had histories suggestive of salpingitis, and in two of them there was infection of Bartholin's glands. Five other patients with evidence of salpingitis on admission were entirely cured with hot douches and mercurochrome treatment, and in no instance did salpingitis develop during treatment. Of the 25 cases absolutely cured the average time occupied by the treatment, including the month during which all treatment was suspended prior to the fourth examination, was three and two-third months. Brady holds that infection of Bartholin's glands should be treated by their complete removal, and he claims that two distinct advantages of the mercurochrome method are its simplicity and minimal danger of salpingitis resulting.

Pathology.

111. Hepatic Activity in Toxaemia.

E. L. OPIE (*Journ. Amer. Med. Assoc.*, November 14th, 1925, p. 1533) discusses the relation of the liver to toxaemic conditions. It has been shown by many observers that the liver can remove from the blood certain substances owing to the ability of some of the endothelial cells lining the sinusoids of the liver to arrest and engulf minute insoluble inorganic particles circulating in the blood, and also bacteria, substances in colloid suspension, and probably certain substances dissolved in the plasma. The liver takes up bacteria which have penetrated the intestinal wall and entered the portal circulation, thus preventing their entrance into the systemic circulation; this activity was found to increase with immunization. Micro-organisms that have temporarily lodged within vessels of the lungs or other organs are finally dealt with by the liver. This power of fixation of injurious substances may cause destructive changes and permanent lesions of the liver. Opie adds that experiments suggest that the action of the liver on foreign protein is analogous to its action on bacteria, since in both instances the injurious effect is diminished and the protective action increased as the result of immunization. It seems probable that it has a similar effect on many injurious bacterial products which act as antigens and induce immunity.

112. Effects of Quinine on the Blood Sugar.

T. A. HUGHES (*Indian Journ. Med. Research*, October, 1925, p. 321), as the result of experiments and from a study of the literature, concludes that quinine influences the level of the circulating glucose by stimulating the sympathetic system. This probably results in the secretion of adrenaline leading to hyperglycaemia; insulin is then liberated and causes hypoglycaemia. The method by which quinine may affect the output of insulin is not known, and while it is possible that it acts by stimulating the para-sympathetic nerves, causing a lowering of blood sugar, the hypoglycaemia may be due to induced hyperaemia of the pancreas, which has been shown to cause an increased production of insulin. The effect of insulin on the hyperglycaemia which large doses of quinine produce in rabbits is similar to its effect on adrenaline hyperglycaemia. The glycogenolytic effect of quinine is inhibited by ergotoxin and in a less degree by pituitrin. In antimalarial doses quinine causes a lowering of the blood sugar in man, an effect which is antagonized by pituitrin, and the fall in blood sugar so produced may sometimes set up mild symptoms of hypoglycaemia, which can be prevented by carbohydrate ingestion or by a meal rich in carbohydrate half an hour to an hour after the drug has been taken.

113. The Blanching Phenomenon in Scarlet Fever.

K. E. BIRKHAUG (*Journ. Clin. Investigation*, No. 3, 1925, p. 273) summarizes his observations as follows: (1) Serum from normal persons without a history of scarlet fever or general septic infections produced the Schultz-Charlton rash extinction phenomenon in 4 out of 6 cases tested on the second day of the rash, and in 1 of 7 cases tested on the third day of the rash. (2) Serum from convalescent scarlet fever patients produced the Schultz-Charlton phenomenon in 24 out of 27 cases tested, or in 89 per cent., during the first sixty hours of the rash, but did not cause blanching seventy hours after appearance of the rash. (3) Dochez's serum produced the phenomenon in 40 cases, or 100 per cent., during the first sixty hours of the rash. It continued to produce blanching seventy hours after the appearance of the rash, but did not produce blanching eighty hours after the rash had appeared. This indicates that Dochez's serum possesses the same specific property that is found in normal and convalescent serum, but contains this specific property in considerably greater concentration. (4) Blood serum from scarlet fever patients first showed the property of producing the Schultz-Charlton phenomenon about the eighth day of disease. (5) Epinephrin, normal horse serum, and diphtheria antitoxin consistently failed to produce the phenomenon. (6) Normal horse serum, convalescent scarlet fever serum, and Dochez's serum failed consistently to produce blanching in other eruptive diseases. (7) Rash extinction areas were directly proportional in size to the amount of serum injected.

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

114. Local Immunity in Mumps.

A. CRAMER (*Rev. méd. de la Suisse rom.*, December 25th, 1925, p. 893) records a case of mumps which occurred during an epidemic of the disease at Geneva, in a boy aged 16, in whom the disease was confined to the sublingual glands. Three years previously he had had a first attack of mumps, when he had a bilateral swelling of the parotid and submaxillary glands followed by left orchitis. The case was thus an example of local immunity which Askanazy attributes to the endothelial cells, and especially to the cells of connective tissue. In enteric fever, for example, the typhoid or paratyphoid bacilli are attracted by the intestine, and in mumps the salivary and genital glands are specially affected. The cells of these organs show an "avidity" for the mumps virus, and when their "avidity" has been satisfied a fresh dose of the virus has no longer any effect. It seems probable that local immunity is established rapidly long before the appearance of antibodies, so that the participation of the latter in the process of vaccination and immunization does not seem to be proved. It is suggested that in the present case the first attack of mumps vaccinated the cells of the parotid, submaxillary gland, and testis, and that these glands, having become saturated with the virus, became refractory at the time of the second infection, whereas the sublingual glands which had not been in contact with the virus on the first occasion attracted and absorbed it.

115. The Prognosis in Subacute Bacterial Endocarditis.

E. LIBMAN (*Amer. Heart Journ.*, October, 1925, p. 25) records his observations on 800 cases of subacute bacterial endocarditis extending over a period of twenty-five years. He divides the cases into the following five groups: (1) Cases of the usual type, running a course of four to eighteen months or more and characterized by fairly marked elevation of temperature, positive blood cultures, and usually embolic phenomena. Libman has records of at least ten complete recoveries in this group. If cases which recovered and finally developed a fatal recurrence be added, this number is raised to twelve. The cause of death in this group is usually exhaustion. Embolism of a coronary artery is rare, of a cerebral vessel frequent. Other important causes are polynuclear meningitis, subarachnoid and intraventricular haemorrhage due to rupture of embolic aneurysms, and rupture of such aneurysms elsewhere in the body, hyperpyrexia, and uraemia. (2) Cases in the bacteria-free stage. Patients in this group may remain well indefinitely, but are liable to a recurrence, the issue of which may or may not be favourable. (3) Transitional cases in which the symptoms are present but the blood cultures are negative. Such cases are usually fatal in a short time. (4) Mild cases of long or short duration. All the patients which Libman has seen recovered. (5) Recurrent cases in which the recurrence ends in recovery or death. The repetitions of the infection may be due to invasion from a focal infection or to invasion of the blood by bacteria, deposited in the various organs during the previous attack.

116. Spontaneous Meningeal Haemorrhage.

JOSEPHINE B. NEAL (*Journ. Amer. Med. Assoc.*, January 2nd, 1926, p. 6) records 35 cases of spontaneous meningeal haemorrhage and discusses this rare condition. In most of the cases no cause could be determined, but in 4 cases the haemorrhage was associated with an attack of epidemic meningitis and in another 4 cases with a cardiac lesion. Four other cases were associated respectively with pneumonia, syphilis, nephritis, and high blood pressure. Recovery followed treatment in 21 out of the 35 patients, though one died of nephritis a month later. The early symptoms were those of an acute and often of a fulminating meningitis. The onset was sudden, with intense headache, usually vomiting, and not infrequently unconsciousness within a few hours. In some cases there were twitchings or convulsions, and stiffness of the neck, and a positive Kernig sign; changes in the reflexes were observed within a few hours or in a day or two. In most instances there was a rise of temperature of 1 to 3 degrees; the pulse was usually but not invariably slow. Early unconsciousness was not found to have any prognostic value. The diagnosis was made chiefly by examination of the spinal fluid, which contained blood evenly distributed through it without signs of coagulation. The author considers that lumbar puncture is a most important measure in treatment. She states that it should be repeated daily, or less often, according to the clinical symptoms; in most of the cases it was followed by improvement. Antimeningitic serum was injected in several cases and may have had a restraining influence on the haemorrhage.

117. Hyperglycaemia without Acetonuria.

W. P. ARGY (*Boston Med. and Surg. Journ.*, December 31st, 1925, p. 1236) gives an account of a case of diabetes mellitus which lasted for six months and was characterized by the absence of acetonuria, high blood sugar concentration, and a considerable amount of acetone in the spinal fluid. The patient, a negro, aged 33, was admitted to hospital in a comatose state, after having been treated by dietetic restriction. The urine contained much albumin and many hyaline casts, together with sugar; the blood sugar was 1.71 per cent. Insulin was given as emergency treatment, but, though the blood sugar concentration was reduced at once, the patient died the next day without recovering consciousness. In the kidneys advanced fatty degeneration and necrosis was found; there was a focal necrosis of the liver with fatty degeneration, cerebral oedema, early bronchopneumonia, and a dense interstitial fibrosis of the pancreas. The author thinks that the large amount of sugar in the urine, together with the absence of acetonuria, may be associated with the kidney complication, as has been previously suggested by Joslin.

118. Congenital Syphilis of the Joints.

P. BLUM and FATOU (*Presse Méd.*, October 14th, 1925, p. 1366) report six cases of late congenital syphilis of the joints. In addition to the classical osteo-articular type there exist also pure synovial forms which, owing to their polymorphism, may simulate acute, subacute, or chronic rheumatism. They may be accompanied by fever and be painful or indolent. In some cases the appearance of bilateral hydrarthrosis, whether simultaneously or not in both joints, points to a syphilitic etiology. Systematic examination of the synovial fluid brought to light the existence of a polymorphonuclear count of from 70 to 95 per cent.; the fluid was sterile, and animal experiments were negative. The Wassermann test was always positive. Congenital syphilis is believed to play an important part also in the development of some fibrous forms of chronic arthritis deformans. The authors think that the fixation of a fibro-ankylotic character which occurs in gonorrhoeal arthritis may be referable sometimes to congenital syphilis.

Surgery.

119. Infections by Fusiform Bacilli and Spirochaetes.

I. PILOT and K. A. MEYER (*Arch. Derm. and Syph.*, December, 1925, p. 837) point out that putrid infections are often caused by the organisms of Vincent's angina, and the source of these infections is related to the normal distribution of the bacteria in the body. They report a case of gangrenous infection of a finger in which these organisms were found. A negro in the course of a fight was bitten on his left middle finger. The next day the finger was swollen; one week later a swelling on the radial side was incised. The lesion subsequently became deeper and discharged foul pus. A deep ulcer occupied the base and sides of the distal phalanx; it involved the entire circumference of the middle phalanx, and extended on to the dorsal surface of the proximal phalanx. The lesion was moist and dull green in colour, bone was visible in the centre of the base with a black irregular slough around. The margins were irregular and shaggy, and bled readily. The discharge was thick, blood-stained, and purulent, and had a putrid odour. The epitrochlear and axillary lymph glands were not enlarged; the Wassermann test was negative. The radiologist reported an old fracture of the middle phalanx with a deep destructive infection superimposed. Pathological examination showed many fusiform bacilli, spirochaetes, and a few streptococci and diphtheroids. Two doses of 0.6 gram of neo-arsphenamine were given intravenously, but as the distal part of the finger was hanging loosely amputation was performed through the middle phalanx. Two more doses of neo-arsphenamine were given later; following this the ulcer improved rapidly and was completely healed eight days after the operation.

120. A Pulsating Sacral Tumour.

M. BÉCLÈRE (*Journ. de Radiol. et d'Électrol.*, November, 1925, p. 503) describes the case of a girl, aged 13, who had a large irregularly rectangular swelling occupying the whole of the sacral area, apparently following a fall four months earlier. The skin was smooth and thin, but otherwise normal; the subjacent tumour appeared somewhat elastic and was distinctly pulsatile. The patient suffered from incontinence of urine and faeces. There was tactile and thermal anaesthesia over a saddle-shaped area comprising the buttocks, perineum, vulva, and inner surfaces of the thighs. The lower limbs were so wasted and weak that she could walk only a few steps when supported on either side. The abdominal and patellar reflexes were present, but the tendo Achillis reflex had disappeared on both sides. A skiagram showed almost complete decalcification of the sacrum. The Wassermann reaction was negative. She received four applications of *x* rays at intervals of two days, and fifteen days after the fourth irradiation the tumour was distinctly smaller and pulsation had ceased. Incontinence of faeces and enuresis occurred only at night, during sleep. The patient could raise herself and walk a few paces without pain. Three weeks after the termination of the first series of irradiations a second course of four was given over the suprapubic region in the direction of the anterior surface of the sacrum. Five months later the patient had gained 11 lb., and appeared to have recovered her health completely. She could stand and walk without pain, as before her fall. A slight ridge in the sacral region was the only vestige of the tumour. The lower limbs had recovered their normal size, but the saddle anaesthesia persisted and the tendo Achillis reflex had not reappeared. Incontinence occurred nocturnally at intervals of ten to fifteen days. A skiagram of the pelvis showed some deformity of the sacrum, but no other abnormality.

121. The Treatment of Keloid.

P. DEGRAIS and A. BELLOT (*Presse Méd.*, November 28th, 1925, p. 1531) describe the factors which predispose to keloid, which include a lymphatic area and a tendency to seborrhoea; they then describe three methods of treatment. The first is surgical; its success is dependent on the extent and situation of the growth and it may be followed by recurrence; after-treatment by radium is recommended. The second method is to attack the scar directly by such methods as scarification, electrolysis, escharotics, or carbonic acid snow. Most of these methods are painful and can therefore only be applied to small scars. The third method is the one of choice and consists of either *x* rays or radium, the latter being preferable because it is more easily controlled. The dose will depend on two factors—the depth of the scar and the tolerance of the patient. The object is to penetrate to the base of the growth and at the same time to avoid reaction in the adjacent tissues.

122. Tumour of the Carotid Body.

G. LECLERC (*Bull. et Mém. Soc. Nat. de Chir.*, November 28th, 1925, p. 982) records a case of a tumour of the intercarotid body in a woman, aged 37, which had been present for seven years. At the operation the common carotid was found to run through the tumour, which was firm in consistence, did not pulsate, and evidently arose from the carotid body. Its removal was difficult, and entailed ligature of the carotid artery and resection of a portion of the internal jugular vein. The post-operative course was complicated by dysphagia and aphonia, but there were no cerebral or paralytic symptoms. Her condition slowly improved, but there was still some difficulty in deglutition and weakness of the voice. These tumours of the carotid body histologically reproduce the structure of the normal gland; they are apparently benign in character. Operation for their removal is difficult, and a mortality rate of between 20 and 30 per cent. was reported in a series of collected cases.

123. Results of Sympathectomy in Angina Pectoris.

T. JONNESCO and D. IONESCO (*Presse Méd.*, December 26th, 1925, p. 1697) have performed total resection of the sympathetic stellate ganglion in 32 cases of angina pectoris, partial resection of the cervical sympathetic in 24, and the Eppinger-Hofer resection of the depressor nerve in 18. All three operations gave about the same mortality—namely, 20 per cent. The patients who recovered showed no cardiac disability, the pulse and blood pressure being unaffected and the heart responding to drugs such as adrenaline as before. One man with angina, operated on nine years previously, was now working seven days a week and did much walking; another had been a butcher for three years and felt well. A young man operated on for Graves's disease had been through the war since; and two epileptic women were now married and had large families, twenty-five years after operation. The authors state that the patient may have to remain in bed for four months after the operation. The freedom from subsequent cardiac disability was to be expected in view of the physiological findings, it having been shown that the heart can meet all needs of the circulation by the automatism of its muscle, even when communications with the central nervous system are quite cut off.

Therapeutics.

124. Treatment of Scarlet Fever.

U. FRIEDEMANN and H. DEICHER (*Deut. med. Woch.*, November 13th, 1925, p. 1893, and November 20th, p. 1938) maintain that the organisms described by Di Cristina, Caronia, and Sindoni as the cause of scarlet fever are merely precipitates derived from the culture media and that the eruptions produced thereby are only anaphylactic reactions to foreign proteins. They agree that the scarlet fever streptococcus described by the Dicks and Dochez fulfils Koch's postulates. The uncertain therapeutic action of the serum of scarlet fever convalescents is readily comprehensible, since there is no means of determining its antitoxin content. The serums of individual convalescents show great differences. Moreover, the difficulties of obtaining a sufficient quantity of serum in practice are very great. Lastly, the best convalescent serum cannot be compared for efficacy and antitoxin content with the scarlet fever streptococcus serum. Dochez's serum was used in fourteen cases of scarlet fever in doses of 40 to 50 c.cm. intramuscularly; in very severe cases the injections were repeated on the following day. The warning is given that, owing to the large size of the dose, the risk of anaphylaxis must be borne in mind. The serum should be given as early as possible, but if it is injected within the first three days of the disease no difference can be detected in its action. It is only after the fourth day that its effect becomes less striking, though it is still distinct. In all but three of the fourteen cases the injection of serum was followed by a remarkable change in the clinical picture. In the course of twelve to fourteen hours the temperature fell by crisis to normal and the feeling of illness disappeared. Complications, if not present at the time of injection, did not occur. This remedy is described as being superior to any other therapeutic serum, including even diphtheria antitoxin. During the last ten years scarlet fever in Germany has assumed a remarkably mild form, but epidemics have occurred in which the mortality was as high as 20 or even 40 per cent., and in such epidemics it is suggested that the serum would be of the utmost value.

125. The Use of "Bipp" in Osteomyelitis.

A. P. MACKINNON (*Canadian Med. Assoc. Journ.*, November, 1925, p. 1222) states that the treatment of osteomyelitis is still far from satisfactory and urges the more frequent use of bipp. He believes that few cases of osteomyelitis are recognized by the general practitioner in the early stages, when they might be cured by simple drainage, and it is not until there are present discharging sinuses, bone cavities, and sequestra that the patient is referred for surgical treatment. At this stage MacKinnon uses bipp: the wound is thoroughly exposed and all sinuses traced to their origins. Sequestra are removed, the walls of the cavity levelled so as to allow the soft parts to fall in, or the cavity filled with fat grafts in order to leave no dead space. Bleeding must be stopped as far as possible, the wound thoroughly swabbed with alcohol-soaked gauze, and bipp then applied so as to leave a thin smear, the wound being closed in layers without drainage. Dressings were usually not removed for ten to fourteen days after the operation, when the stitches were taken out; this eliminated frequent painful dressings. MacKinnon states that there is no danger of serious poisoning, but healing by first intention has not been so frequent in his cases as in those reported by Rutherford Morison.

126. Boric Glycerin in Post-operative Urinary Retention.

TANT (*Bruxelles-Médical*, December 13th, 1925, p. 216) for the last five years has treated 175 cases of post-operative urinary retention by the following method, modified from that of Corbineau. The bladder is first emptied by the catheter and then an injection is given of glycerin 50 grams, boric acid 5 grams, sterilized water 5 c.cm. Power of micturition is established in a quarter to half an hour. In about three-quarters of all cases one injection suffices; if not, a second injection is nearly always successful, and only very exceptionally is a third necessary. Tant has known only one instance of failure; this occurred in a man suffering with erysipelas who died three days later. As the operations were of the most diverse kinds, ranging from resection of the rectum to the radical cure of varicocele, and as success was so constant, the author considers this method worthy of routine use.

127. Vaccine Treatment in Epidemic Encephalitis.

A. REMOND and H. COLOMBIER (*Ars medica*, December, 1925, p. 177) treated five cases of post-encephalitic Parkinsonism by intraspinal injections of the Levaditi-Poincloux vaccine. Only one patient appeared to derive definite benefit from the treatment, three after a slight improvement remained in the same serious condition as before, and one developed severe symptoms after injection which at one time resembled Landry's paralysis. Poincloux, who used the vaccine in 50 cases, 7 of which were suffering from acute encephalitis and 43 from the sequelae, obtained complete cure in 3 and considerable improvement in 2 cases of the acute group, whereas the results in the chronic cases were not so good. Although improvement occurred in every case no actual cure resulted. The present authors conclude that in a condition so invariably fatal as post-encephalitic Parkinsonism there is justification for employing Levaditi's vaccine, even though its use is not without danger. The possibility of an occasional arrest of the disease, especially when the treatment is employed early, must be taken into consideration.

128. The Bromide Treatment of Epilepsy.

W. WEYGANDT (*Klin. Woch.*, December 10th, 1925, p. 2400) states that the combination of the three bromides presents no advantage over the potassium salt, while the latter is cheaper. He thinks that luminal is the better remedy and is invaluable if bromism supervenes, and it is not much more expensive. Many of the modifications or combinations of bromide for use in bromism are in his experience not only expensive but of doubtful value. Bromism can be prevented by administering the drug in capsules that dissolve in the intestine, not in the stomach. All medicinal treatment of epilepsy can be aided by attention to the diet, which should be poor in sodium chloride, although a complete deprivation cannot be borne. No salt should be taken on the plate, milk (the best vehicle for bromide) should be the chief drink, and white bread and meats should be substituted for brown bread and purine-containing flesh. Any exacerbation of symptoms may be treated by rest in bed.

Diseases of Children.

129. Renal Tuberculosis in Childhood.

E. FALCI (*Journ. d'Urol.*, October, 1925, p. 301) discusses the incidence, clinical course, and prognosis in renal tuberculosis in the child as compared with the adult. The condition is less common in childhood, but increases in incidence with age, and the greatest frequency in the young is from the thirteenth to the eighteenth year. The number of cases of bilateral renal tuberculosis is greater in early life; in the first years of life its incidence is double that of later life, 28 per cent. of the cases being in children, 14 per cent. in adults. Bilateral disease is more frequent in the very young and decreases as the child grows up; its course in children is very rapid and soon proves fatal. After operative treatment in unilateral cases there is a mortality of 44 per cent.; in 16 per cent. the condition is aggravated, in 16 per cent. the patient's condition is stationary, and there are 24 per cent. absolute cures. In the adult the incidence of the disease is greatest between 19 and 30 years of age. In bilateral cases the course is not so rapid and there is a greater reaction on the part of the patient. After an operation in unilateral cases there is a complete cure in 56 per cent. of cases in adults. Falci concludes that in children the disease is very serious, and that it tends to spread generally; even after operation the prognosis is distinctly poor.

130. Brain Tumours in Children.

M. CRITCHLEY (*Brit. Journ. Child. Dis.*, October-December, 1925, p. 251) discusses the phenomena common to all varieties of cerebral tumour as seen in pediatric practice in a paper based on the analysis of 125 cases admitted to the National Hospital, Queen Square, between 1912 and 1925. The rarity of the disease in the first few years of life is shown by the fact that only three in this series occurred in the first thirty-six months. The frequency then gradually increases up to the age of 8, after which a fairly uniform level is maintained. As regards the localization 59, or 47.2 per cent., of the tumours were situated in the pons or cerebellum; 34, or 27.2 per cent., in the cerebral hemispheres; and 14 were classified as pituitary or suprapituitary. In other words, the more archaic and primitive areas of the brain tended to be affected by tumour growth rather than the younger and higher evolved telencephalon. As regards the various types of tumour tuberculomata were the most frequent, the masses being often multiple. Gliomata came next in frequency. Sarcomata were third in importance, while gummata, endotheliomata, and neuro-fibromata occurred in much smaller proportions. Carcinomata were very rare. Headache was the most constant symptom of all, but varied greatly in severity, character, and position. An alteration in the child's disposition was often the earliest and most outstanding symptom in cerebral tumour. Somnolence was a marked and persistent feature from the onset, with tumours in certain localities, especially in the neighbourhood of the diencephalon and mesencephalon. Vomiting occurred in most patients sooner or later. In very slow-growing tumours, such as endotheliomata, it might be absent altogether. Papilloedema, often incorrectly described as optic neuritis, occurred in about 80 per cent. of all cases, being most intense in subtentorial growths. Convulsive attacks, with or without unconsciousness, might occur at any stage. In most cases the march of the disease was progressively downhill, but in some cases, especially in tuberculomata situated in the ponto-cerebellar region, one or two remissions might occur.

131. Pyelitis in the Infant.

G. LEMOINE (*Le Scalpel*, October 10th, 1925, p. 1049) holds that in infantile pyelitis the blood stream is the most frequent channel of infection of the kidney. The organisms commonly recovered, generally in pure culture, are *Staphylococcus pyogenes albus* and *citreus*, the pneumococcus, *B. typhosus*, *B. coli*, *B. tuberculosis*, *B. diphtheriae*, and the gonococcus, the one that appears most often being the colon bacillus. The clinical picture is of a severe general infection—high temperature, convulsions, cyanosis, vomiting, and diarrhoea. The pain may be either suprapubic or iliac. Two types are recognized, the primary and the secondary, the latter following gastro-enteritis in the summer, or affections of the upper respiratory passages in the winter. There is usually nothing to indicate renal trouble until the urine is examined and found to be acid and to contain pus. Treatment includes warmth, applied locally, a diet of milk, or milk foods, and fluid should be given freely. When vomiting occurs the author gives enemata, and subcutaneous, intravenous, or intraperitoneal injections of glucose serum. Helmoltz has recommended hexamine tetramine in doses of 3 to 5 grains four or five times a day for infants over six months. The treatment most generally adopted, however, is rapid alkalinization of the urine with potassium citrate, less commonly with the carbonate or bicarbonate of soda. For nurslings Helmoltz finds potassium citrate sufficient, either alone or with equal parts of sodium bicarbonate. To an infant of two months or more he gives 1½ drachms daily, increasing by 1 drachm daily till the urine becomes alkaline. The treatment should be continued for two weeks. With older children, if the symptoms have not improved after three days of alkalinization of the urine, it is necessary to give urotropine and acid sodium phosphate, which will render the urine acid again. Further changes may have to be rung on alkalinizing or acidifying the urine. In most cases material improvement follows on alkalinization of the urine. But after about ten days the urine should be rendered acid again with acid phosphate or benzoate of soda, kept acid for ten days, and then alkalinized again with potassium citrate. Cure should not be considered complete until the urine remains sterile after this test.

132. Hypoplasia Mandibulae as the Cause of Choking Fits.

E. LENSTRUP (*Acta Pediatrica*, October 22nd, 1925, p. 154) records three cases in infants a few weeks old who suffered from violent choking fits caused by a deficient development of the lower jaw, as the result of which the tongue could not be kept in its normal position in the mouth, but fell back into the pharynx, blocking the opening of the larynx. The patients were successfully treated by fixing the child in a lateral position by means of pillows, so that the tongue fell forwards by its own weight. Lenstrup quotes two similar cases reported by Shukowsky, who described them as examples of congenital stridor. One of these infants died of asphyxia. Cleft palate was present in all five cases, but did not appear to affect the clinical picture.

Obstetrics and Gynaecology.

133. Conservative Treatment of Eclampsia.

S. BERMAN (*Boston Med. and Surg. Journ.*, January 7th, 1926, p. 7) compares the Stroganoff and Rotunda methods of the conservative treatment of eclampsia, and gives an account of his own modification of the former. Absolute quiet in a darkened room is provided. On admission the patient receives a quarter of a grain of morphine, followed by the Stroganoff routine of chloral hydrate, morphine, milk, and saline solution. All examinations are made under gas and oxygen anaesthesia, but so far as possible any disturbance of the patient is avoided. Magnesium sulphate is given intravenously after each convulsion, the dose being 20 c.cm.

of a 10 per cent. solution, and oxygen is administered during the convulsion. Magnesium sulphate is also given if the patient becomes restless some hours after a convulsive attack. Berman recommends having available a 25 per cent. solution of calcium chloride, 10 c.cm. of which can be given intravenously in the event of respiratory embarrassment after the magnesium sulphate injection. He has not experienced this complication himself, however. If the patient is comatose and not taking fluids by the mouth, he recommends the intravenous injection of 1 litre of a 5 per cent. glucose solution every six hours. He does not think venesection necessary as a general rule, and, unless there is no response to treatment, he postpones delivery of the patient until the os is fully dilated and convulsions have ceased. Transfusion may be necessary after delivery if shock supervenes.

134. Cornual Pregnancy.

J. L. GROVE (*Surg., Gynecol. and Obstet.*, January, 1926, p. 102) believes that there has been during recent years an increase in the incidence of tubal pregnancy as compared with normal gestation, possibly owing to more cases being recognized by the improved methods of diagnosis, and also owing to surgical treatment being now more common and facilitating diagnosis. He maintains also that gonorrhoea should be considered as an important etiological factor in ectopic pregnancy, and states that this infection was traced in eight consecutive cases of ectopic gestation in his clinic. He gives details of one case of cornual pregnancy, and suggests that the asymmetry of the fundus, when distinguishable by bimanual examination, is very suggestive, though it may be solid enough for a fibroid.

135. Pregnancy in Chronic Leukaemia.

R. CHIARI and F. DAUTWITZ (*Wien. Arch. f. inn. Med.*, November 1st, 1925, p. 475), who record an illustrative case, state that there are only twelve cases, including their own, of pregnancy occurring in leukaemia. As a rule the foetus is expelled dead, and in only five instances, including the authors' case, was a living child born. The authors' patient was a woman, aged 31, who had been suffering from chronic lymphatic leukaemia for eighteen months. She was treated by radium in the fifth month of pregnancy, which ran a normal course. A healthy child was born at full term, and there was no dangerous post-partum haemorrhage. Owing to a return of the leukaemic symptoms the patient underwent a second series of radium applications twenty-two months after the first, and rapid improvement followed as on the first occasion. A year after the delivery both the mother and child were in good health.

136. Perforation of the Uterus during Curetting.

MOLIN and DESJACQUES (*Lyon Méd.*, November 29th, 1925, p. 643) record four cases of accidental perforation of the uterus during operation for curetting. In two cases the instrument was a small Hegar's dilator (No. 1 and No. 2 respectively), and in the third case perforation by the curette was not suspected until an iodine injection had failed to return from the uterus. The authors suggest that in general these perforations of the uterus are best treated by incising and draining the posterior fornix, a large gauze drain being left for five days in the colpotomy wound. Against purely expectant treatment they urge (1) that complete asepsis is obtained with difficulty in a curetting operation; (2) that even with minute perforations there is always (as proved in their own colpotomy and in other surgeons' laparotomy cases) bleeding in the pouch of Douglas whereby an excellent culture medium is afforded to micro-organisms; (3) that colpotomy secures drainage at practically negligible operative risk. If the interior of the uterus is highly septic an abdominal operation, completed if necessary by hysterectomy, is indicated.

Pathology.

137. Serological Classification of the Haemolytic Streptococci.

S. ANDERSEN (*C. R. Soc. de Biologie*, January 5th, 1926, p. 1690) has made an examination of 88 strains of haemolytic streptococci obtained from human beings, of whom 61 were suffering from scarlet fever. After a preliminary attempt to employ the agglutination test in their classification, he abandoned this method on account of its technical difficulties and resorted to the complement fixation reaction. Immune serums were prepared by injecting rabbits with cultures killed by heat at 65°C. for thirty minutes, eight different strains being employed. Each serum was then absorbed with every strain in the series and then tested against its homologous antigen. The suspensions utilized were from ascitic agar cultures, the growth of which had been washed twice with saline. The results showed that the 88 strains fell into five serological groups; one of these contained all of the scarlet fever strains. A serum prepared against a strain of endocarditic origin was absorbed only by its homologous organism. A serum prepared against an abscess strain was absorbed by three other strains of varying origin. A serum prepared against an erysipelas strain was absorbed by nine strains, five of which were isolated from cases of erysipelas. Three serums prepared against a strain of meningeal, of phlegmonous, and of anginal origin respectively were absorbed by every strain except the endocarditic one. A serum prepared against a strain isolated from a patient with catarrhal angina was absorbed by all the scarlatinal strains, the anginal strains, and three others. Finally, a serum prepared against a strain of scarlatinal origin was absorbed by all the scarlatinal strains, and by only two others. The scarlatinal strains, therefore, form a fairly homogeneous group.

138. Chronic Intestinal Dyspepsia in Children.

A. BROWN, A. M. COURTNEY, G. A. DAVIS, and I. F. MACLACHLAN (*Amer. Journ. Dis. Child.*, November, 1925, p. 603) submit that the characteristic intestinal flora in the chronic intestinal dyspepsia of childhood is strongly suggestive of a bacterial influence in the etiology. There is a delay in the normal change from the Gram-positive (*Bacillus bifidus*) or aciduric group to the Gram-negative or colon group. The authors are not yet satisfied whether this aciduric group comprises several distinct organisms, or only one extremely pleomorphic organism, but tend rather to support Noguchi in the latter view. A spore-bearing bacillus was isolated from the faeces of two children suffering from chronic intestinal indigestion, which at first was proteolytic, but was found to change its nature greatly after long culturing. Some feeding experiments with white rats showed that they did not gain normally while being fed with milk cultures of the above spore-bearing bacillus, but resumed the normal rate as soon as the diet was changed. Lactic acid milk and milk cultures of *Streptococcus lacticus* inhibited the growth-depressing effect. The proteolytic nature of this spore-bearing bacillus is of interest since abnormal putrefactive activity in chronic intestinal indigestion is general, as evidenced by the high ammonia content of the faeces. *Streptococcus lacticus*, cultures of which are used therapeutically, was very active metabolically in casein-enriched, low sugar milk, and formed no harmful products. It establishes itself as the predominant organism of the faeces soon after its ingestion has been begun, but probably takes a long time to oust completely the pathological bacteria.

139. Cholesterin in Pleural Fluids.

C. MAININI (*Bull. et Mém. Soc. Méd. des Hôp. de Paris*, December 10th, 1925, p. 1534) states that rather more than twenty cases of pleural fluids containing cholesterin have been recorded, but the etiology has not been investigated. He now describes two new cases in men, aged 27 and 28 respectively, who had been treated with apparent success for pulmonary tuberculosis by artificial pneumothorax. In both cases the family history of tuberculosis was very bad, and the subsequent effusion was sterile and extensive. On standing, the pleuritic fluids showed three strata: the lowest was crystalline and fairly copious, the middle was pale, and contained sparkling crystals, while the highest stratum consisted of yellow opalescent fluid. There was no coagulum. Aspiration showed the pleurae to be thickened and tough, but without extensive adhesions. No tubercle bacilli were found, but the pulverized crystalline sediment proved to be pathogenic when injected into guinea-pigs. The soluble cholesterin of the exudates was much increased and both patients had hypercholesterinaemia. Repeated paracentesis was required in both cases, followed by irrigation with chlorine water.

140. Post-anaesthetic Hypoglycaemia.

H. JOSEPHS (*Bull. Johns Hopkins Hosp.*, December, 1925, p. 376) found that after short periods of ether narcosis in a series of tonsillectomies in children a moderate degree of hypoglycaemia occurred and was accompanied by an increased excretion of acetone bodies in the urine, more than would have been the case from an equal period of starvation without anaesthesia. This hypoglycaemia was usually, though not invariably, preceded by an increase in the respiratory quotient. Josephs concludes that anaesthesia may cause an increased oxidation of carbohydrate lasting for several hours, and that this is usually accompanied by a more or less parallel hyperglycaemia. He believes that the increased carbohydrate oxidation is in part at least responsible for the hypoglycaemia which occurs twelve to eighteen hours later, and is a factor in recurrent vomiting and post-anaesthetic acidosis.

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

141. Heart Failure with Normal Rhythm.

J. PARKINSON and A. E. CLARK-KENNEDY (*Quart. Journ. Med.*, January, 1926, p. 113) investigated 100 unselected cases of severe congestive heart failure with normal cardiac rhythm between the ages of 20 and 70, with 84 deaths and 48 necropsies. Only the severe form in which the patient was confined to bed with breathlessness and oedema of the legs was studied, the object being to define the type of case in which auricular fibrillation might be expected if it were going to occur at all, recognized endocarditis and heart failure in the acute infections, such as pneumonia, alone being excluded. Pathologically failure was found attributable to cardio-vascular hypertrophy (high blood pressure) in 26 cases, to cardio-vascular syphilis in 20, to chronic pulmonary disease in 19, to chronic rheumatic heart disease in 7, to acute or chronic rheumatic endocarditis in 4, to atheromatous coronary occlusion in 4, and to congenital heart disease in one. Chronic rheumatic myocarditis and the toxaemia of exophthalmic goitre are undoubted factors in the production of auricular fibrillation, and intensive treatment with digitalis may occasionally produce it. In heart failure due to acute infections of the heart itself, such as rheumatic carditis, infective endocarditis, and diphtheria, normal rhythm usually persists. In hyperplesia (cardio-vascular hypertrophy) it was found that the blood pressure sometimes fell to normal during cardiac failure. The authors find that fibrillation is of value in the differential diagnosis of the pathology of a case of heart failure and it may assist in assessing the relative importance of different causes in a complicated case. The average duration of life after the onset of oedema was found to be only eight months, and the prognosis in cases of failure with normal rhythm was less favourable than in a corresponding degree of failure with auricular fibrillation, being least favourable in rheumatic cases and in those secondary to chronic lung disease.

142. The Prognosis for High Blood Pressure.

R. EHRSTRÖM (*Ugeskrift for Laeger*, November 19th, 1925, p. 1038), as the result of a study of over 300 cases of high blood pressure, finds that the average age at which this condition begins to make itself felt by the patient is 52 years, but that before this age the high blood pressure has existed for about ten years unobserved by the patient. The average age at death of this class of patient is about 62 years; thus, from the beginning to the end of this condition there is apparently about two decades of life. Life may, however, last as long as twenty-five to forty years, and in 20 of the author's cases in which he kept in touch with the patient for ten to sixteen years the blood pressure was seldom or never below 200 mm. of mercury, although most of the patients were well and fit for work during the greater part of this time. The author insists that the patient whose high blood pressure begins at the age of 50 and lasts for twenty years or more can hardly complain that this condition has shortened his life, seeing that, at the age of 70, he has already exceeded the average expectation of life. Factors affecting the prognosis unfavourably are an early onset of the high blood pressure, the coexistence of syphilis, and disease of the kidneys. In most cases it is impossible to decide whether the disease is progressive or not, and the physician is therefore not justified in giving a grave prognosis.

143. Mumps with Visceral Complications and Death.

M. BARBATO (*Rif. Med.*, November 23rd, 1925, p. 1109) reports the case of a man, aged 53, in whom inflammation of the left testicle developed one week after the onset of an attack of mumps. Seven days later he showed signs of acute uraemia (unconsciousness, high blood pressure, anuria, cardiac weakness), which yielded to bleeding and purging, the uraemia being probably an exacerbation of a previous underlying nephritis. Later on, when the acute symptoms of uraemia had passed off, the patient developed marked sleepiness, diplopia, and paresis of the third and sixth cranial nerves, probably of central origin, and possibly due to small thrombi in the arterioles, which were already affected with arterio-sclerosis. Consciousness was unaffected, and, although lumbar puncture showed considerable pressure, there was no headache. The heart became enlarged and gradually failed. Death followed vesical and respiratory paralysis. No autopsy was made. The author thinks that the later symptoms may have been due to mumps.

144. Late Perforation in Typhoid Fever.

DARAIGNEZ (*Journ. de méd. de Bordeaux*, December 10th, 1925, p. 1086), who records a personal case, states that intestinal perforations in convalescence from typhoid fever are rare, occurring in only 30 per cent. of all typhoid perforations according to Devic and Froment. As a rule they are situated at the lower end of the small intestine, and more rarely in the appendix and caecum. There is usually only a single perforation, but sometimes multiple perforations may be found. The condition may be mistaken for acute appendicitis. There is a striking contrast between perforations in convalescence, which are ushered in by violent symptoms in apparently healthy persons, and those occurring in the acute stage of typhoid fever, when the symptoms are masked by stupor and prostration, and often consist merely in a dissociation between the pulse and temperature. The ideal treatment would be resection of the whole terminal segment of the ileum, but usually the patient's state only permits of suture of the perforation. The prognosis is very bad. The few cases of spontaneous recovery on record are open to criticism, as there was no means of verifying the lesion. Success depends on early operation. Hardly any recovery has been reported when the operation was performed more than twenty-four hours after the onset of the symptoms. Daraignez's patient was a youth aged 17, who was convalescent from a severe attack of typhoid fever which had kept him in bed two months; he had had phlebitis of the left lower limbs three weeks before the onset of the perforation. He was wakened suddenly one morning by severe pain in the right iliac region. There was no vomiting, but there was passage of faeces and flatus. When Daraignez was called to see him, four days after the onset, he made a diagnosis of acute generalized peritonitis from perforation of a typhoid ulcer. Laparotomy was performed under a local anaesthetic, and generalized peritonitis, due to a perforation, was found. The perforation was sewn up and the peritoneum drained. Death occurred the next day. The necropsy showed generalized peritonitis and a second perforation 20 cm. above the first.

145. Acute Parkinsonism at the Onset of Encephalitis.

H. ESBACH (*Bull. et Mém. Soc. Méd. des Hôp. de Paris*, December 10th, 1925, p. 1548), who records an illustrative case, states that acute Parkinsonism is rare at the onset of epidemic encephalitis. Lhermitte and Cornil, Thomas and Jumentié have noted it in old age, and Rimbaud, Rouquier, and Lacambre have also observed it. The associated symptoms in these cases showed that it was connected with epidemic encephalitis. Esbach's case occurred in a man, aged 28, in whom Parkinsonism developed in a single night. The patient, who had been drowsy the previous day, woke up the following morning with so marked a contracture that he was immobilized in bed in a position of semi-flexion, his mouth half open, and the muscles of the limbs rigid. The contracture was accompanied by continual tremor of the fingers. Death, which was preceded by delirium and mental confusion, occurred five days after the onset of the Parkinsonism.

146. The Incidence of Tuberculosis.

R. DÉBRÉ and F. CORDEY (*Paris méd.*, January 2nd, 1926, p. 31) have studied the incidence of tuberculosis at different ages, and conclude that there is evidence that the resistance increases from birth onwards. Thus, whereas the newly born child appears to have little or no resistance, of older children up to 5 years of age exposed to infection only 50 per cent. will develop the disease. Between the ages of 5 and 10 the proportion that become diseased falls to one-third, and from 10 to 15 years to a quarter. In the case of adults similarly exposed to infection only one in twenty develop tuberculosis. This difference in susceptibility, they add, depends upon the power, acquired with age, of reacting to the bacillus by forming localized and fibrous lesions instead of by generalized granulations, as are found in infants and savage races. The occurrence of bone and joint tuberculosis at an earlier age than pulmonary disease indicates a low resistance to the bacillus, the interval between infection and the appearance of disease having been too short to allow the development of sufficient resisting power. The authors add that allergy or the altered reaction to fresh infections and to the injection of tuberculin must have been established for some considerable time before an effective degree of immunity can be developed.

147. Chronic Nasal Diphtheria and Atrophic Rhinitis.

A. ABRAHAM (*Deut. med. Woch.*, December 18th, 1925, p. 2114) records thirteen cases of atrophic rhinitis in which true diphtheria bacilli were found in the nasal cultures; eleven were females and two males. The ages ranged from 14 to 49. All the patients had the same symptoms, which consisted in nasal discharge of several years' duration, formation of crusts, headache, anosmia, and lassitude. With the exception of one case of chronic rhinopharyngitis sicca the clinical diagnosis was atrophic rhinitis. Infection of the nasal accessory sinuses was not present in any. Two patients had chronic otitis media. Two patients had had diphtheria, and another two gave a history of diphtheria in the family. Treatment consisted in administration of 4,000 to 6,000 units of diphtheria antitoxin for three days, combined with twelve to fourteen injections of an auto-vaccine prepared from an isolated strain of diphtheria bacilli, or in most cases from other organisms associated with the diphtheria bacilli, such as *B. proteus* and *B. mucosum*. The nose was also irrigated thrice daily with a 1/4 per cent. solution of chloramine. Abraham concludes that a previous attack of acute diphtheria was the cause of the atrophic rhinitis in these cases. Similar cases had been previously recorded by Pfeiffer.

148. Acute Ascending Myelitis following Chicken-pox.

D. P. WALDMAN (*Journ. Amer. Med. Assoc.*, November 21st, 1925, p. 1612) records a fatal case of this condition in a woman aged 32. The attack of chicken-pox was mild and accompanied by only slight fever. The vesicles were chiefly on the chest and back, with only a few on the abdomen, and none on the face and extremities. Zoster was excluded by the 2-year-old son of the patient having a typical attack of varicella immediately after the subsidence of his mother's eruption. On the tenth day of disease the woman suddenly developed loss of power in the lower limbs, with rapid onset of complete anaesthesia, retention of urine and faeces, and later incontinence of faeces. Clinically the case appeared like acute myelo-malacia, with an extreme degree of softening and degeneration of the spinal cord. Sacral bedsores rapidly developed, together with severe cystitis and diarrhoea. Death, which occurred in coma after three months' illness, was preceded for several weeks by progressive weakness and pain in the back of the neck. There was no necropsy.

Surgery.

149. Myositis Ossificans.

A. GRUCA (*Annals of Surgery*, December, 1925, p. 883) points out that though the appearance of parosteal bone within muscle following trauma has been known for over two centuries, yet its etiology and pathology are not fully understood. The traumatic variety follows a single severe injury and is the most frequent type. It affects the thigh and upper arm, and one form occurs after dislocation of the elbow, commonly in the brachialis anticus muscle. The condition is also seen in gunshot wounds and after clean incised wounds. The chronic variety is met with after repeated slight injuries and is found as "rider's bone" in the adductor muscles. Myositis ossificans is also seen in muscles the seat of a metastatic abscess and around joints affected with a chronic inflammatory process. The course may be divided into three stages. In the first typical traumatic symptoms are present, and are followed by pain and impaired movement and increase in size of the mass. Finally growth stops and pain disappears and the mass is clearly shown by the *x*-ray picture. The condition occurs in the thigh and on the arm near to joints commonly, and is usually seen in middle life. Conservative treatment is usually the best, unless the growth interferes with function; it has a tendency to disappear without any active intervention. In some cases simple excision of the mass may be advisable. Myositis ossificans is a reparative process within the young connective tissue originated by inflammation. It is possible that there may be a special tendency, congenital or acquired, for this excessive callus formation to take place.

150. Omental Strangulation.

E. SCHWARZ (*Zentralbl. f. Chir.*, January 2nd, 1926, p. 5) records a case of omental strangulation in which the symptoms suggested acute cholecystitis. He operated upon a somewhat obese woman, aged 48, for a large right inguinal hernia, and in the sac found loops of intestine and omentum which was adherent at two points. The patient made a rapid recovery, but five weeks later she was readmitted with very severe pain in the right hypochondrium, especially in the nipple line; there was obvious rigidity of the abdominal wall, and an oval tumour, moving with respiration, could be felt. A diagnosis of acute cholecystitis was made. On opening the peritoneum a fibrin-covered tumour as large as a child's fist was seen in the gall-bladder region. This tumour was adherent to the anterior abdominal peritoneum and to the liver, and the fibrinous envelope formed a cap over the gall bladder; its surface was mottled with yellowish-green or bluish patches. On removal of the matted omentum the subjacent gall bladder was found to be healthy. The commencing gangrene of the omental mass was due to torsion of its pedicle through ten turns. The pedicle originated beneath the transverse colon, and the adhesion of the omental tumour to the gall bladder produced the clinical symptoms of acute cholecystitis when strangulation occurred. The patient made an uninterrupted recovery. Schwarz states that more than 100 cases of torsion of pedicles of omental masses have been recorded; he remarks that it is probable that most of these cases are traceable to the return to the peritoneal cavity of damaged adherent herniated omentum. The congestion persists, rendering the omental mass hard and heavy; peristaltic action twists the pedicle, and this movement, once started, continues until strangulation ensues. The author recommends that whenever the herniated omentum appears atrophic, adherent, and congested, it should be resected rather than returned to the abdominal cavity.

151. Congenital Dislocation of the Hip.

C. A. VELO (*La Chir. degli Organi di Movimento*, December, 1925, p. 1) reports an unusual sequel to the bloodless reduction of a congenital dislocation of the hip in a girl aged 10 years. After a fortnight's massage the double dislocation was reduced by the Lorenz method and put up in a fixed position. Much oedema and cyanosis, especially of the left leg, followed, so that the apparatus was removed, and eventually it was seen that paralysis of the sciatic nerve had developed, which persisted for six months, when improvement was noted, and in another month complete recovery had occurred. Paralysis of nerves has been described before as a sequel to the treatment of reduction of congenital dislocation, but it is rare, and the author gives the statistics of 113 patients (151 dislocations) treated in his hospital in recent years. Of the 113 patients 103 were female; the ages ranged from 2 to 14, and in 75 the dislocation was unilateral (46 per cent. right, 20 per cent. left). The average length of treatment was seven months, and the case reported above was the only one in which paralysis occurred. In two other cases separation of the lower epiphysis of the thigh and upper epiphysis of the tibia were noted; otherwise no accidents occurred and the results were excellent. The author refers to other accidents in association with this operation, including ecchymosis, laceration of the skin, fracture, gangrene, crural hernia, rupture of the capsule, and convulsions, but adds that as experience is gained these complications get less and less common. A bibliography of some forty references to recent literature is appended.

152. Dilatation of Stenson's Duct.

T. BÁRSONY (*Klin. Woch.*, December 24th, 1925, p. 2500) reports the case of a man aged 70, with two years' history of recurrent swelling of the left parotid gland after eating. The opening of Stenson's duct was patent, and a probe was found to be freely movable in it. Pressure on the parotid swelling produced abundant saliva with some flakes of pus. A parotid calculus was suspected, but skiagrams were negative. A 20 per cent. potassium iodide solution was injected into the duct and skiagrams showed a widely dilated duct, extending into the gland, the filled duct being as large as the little finger. The author is unable to find a similar case in the literature, and attributes the condition to muscular weakness of the walls of the duct; he thinks it is comparable with idiopathic dilatation elsewhere in the alimentary tract. He suggests that the condition would be diagnosed more often if lipiodol was injected before examining Stenson's duct radiologically.

153. Gastric Acidity after Gastro-enterostomy.

K. NICOLAYSEN (*Norsk Mag. f. Laegevid.*, December, 1925, p. 1328) investigated the gastric acidity of fifteen patients who had been operated on for gastric ulcer, with the following results. The majority of those who had been cured after an operation several years previously were without free hydrochloric acid, whereas all those who had not been cured showed free hydrochloric acid in the stomach contents after Ewald's test meal. *X*-ray examination showed that an empty condition of the antrum pylori was associated with an absence of free hydrochloric acid, whereas filling of the antrum was accompanied by persistence of acidity. Nicolaysen's conclusions are as follows: (1) With few exceptions the effect of gastro-enterostomy is proportional to its power to reduce acidity. (2) Diminution of acidity is due partly to decreased secretion and partly to neutralization. (3) Decreased secretion generally coincides with rapid emptying of the stomach and depends among other causes on non-filling of the antrum pylori.

154. Recurrent Peptic Ulcer.

P. RIESS (*Zentralbl. f. Chir.*, December 12th, 1925, p. 2818) observes that in recurrent peptic ulcer there must be considered: hyperacidity of the gastric juice, pyloric spasm, and a neurotic temperament. The relative importance of these three factors is variable, and one or more may be absent. Riess describes the case of a man, aged 27, who was admitted to hospital with a perforated pyloric ulcer which had penetrated the pancreas. The ulcer was excised and an anterior gastro-enterostomy performed, but two and a half months later a second ulcer had perforated. The site of the gastro-enterostomy was normal, but the perforated ulcer was found in the distal loop immediately below the site of the gastro-enterostomy; this portion of bowel was resected. Six months later the patient was readmitted for a third perforation: the ulcer was as large as a pea and was found in the anterior surface of the proximal loop. The site of the former gastro-enterostomy was resected with the neighbouring portion of the stomach wall, and a fresh anterior gastro-enterostomy was performed. The excised portion contained two ulcers, a large perforated ulcer on the anterior surface of the proximal loop and a small shallow ulcer on the anterior surface of the distal loop. Two years later another perforated ulcer was found at an operation.

155. Pulmonary Carcinoma simulating Lung Abscess.

KRAMPF (*Deut. Zeit. f. Chir.*, December, 1925, p. 128), who records three illustrative cases, remarks that pulmonary cancer may assume a variety of forms according to its localization and extent. Thus carcinoma arising from a bronchus is characterized by the early development of a troublesome cough with occasional haemorrhage, whereas the less frequent solid carcinoma developing in the substance of the lung may remain latent for a long time. Cachexia, which is usually present in the subjects of cancer, is always absent at first, because the absorption of the toxic products of the tumour is much less in the lung than in the gastro-intestinal tract. Solid tumours in the substance of the lung usually do not make themselves apparent until they come into relation with the bronchial tree and thereby with the exterior. The tumour then rapidly undergoes necrosis, and portions of it are expectorated, the sputum being at first mucoid, later purulent, and occasionally haemorrhagic. An abscess cavity thus develops and increases in size as the necrosis continues. The process is usually accompanied by a rise of temperature and the growth gives rise to pneumonic changes in its neighbourhood. In the diagnosis of pulmonary cancer from pulmonary abscess most importance is to be attached to examination of the sputum, though it is only by good luck that tumour cells can be discovered in it. The opening of a doubtful abscess cavity may clear up the condition. After evacuation of a true abscess the lung can be seen, whereas the walls of a cavity caused by a tumour present a characteristic appearance due to the presence of necrotic tissue.

156. Congenital Dislocation of the Patella.

R. ZANOLI (*La Chir. degli Organi di Movimento*, December, 1925, p. 83) describes 13 cases of this rather rare affection, with numerous photographs and radiograms. He classifies the cases in two groups—permanent and habitual. Of his 13 cases, 10 occurred in females, but this was rather exceptional, as of 152 cases collected from various sources there was not much difference in the sexes. The condition is often hereditary and familial and frequently associated with other congenital deformities. The author discusses some of the more probable theories of pathogenesis—such as the presence of genu valgum, atrophy of the external condyle, flattening of the trochlear groove, small size of the patella, and arrested development. Most of these conditions he believes are effects rather than causes; he thinks the efficient cause is anomalous orientation of the bony parts of the knee, and especially external rotation of the tibia with slight internal torsion of the lower epiphysis of the femur. The fact that some cases are cured by operation without remedying the torsion he explains by the altered direction of the muscular pull. Incidentally he refers to recent views as to the morphological significance of the patella, which is not now looked upon as merely a sesamoid bone but as a regression of a primitive bone of which the proximal part remains as the patella, the distal as the os trigonum of Bardeleben, while the middle part has disappeared. The treatment is purely surgical and various operations are described. Zanoli prefers median transplantation of the patella tendon combined with capsulorrhaphy. The results are very satisfactory, and photographs are given of patients from three to sixteen years after operation. A bibliography of sixty references is added.

Therapeutics.

157. Treatment of Pulmonary Gangrene.

G. CAUSSADE and A. TARDIEU (*Bull. Soc. de Thér.*, November, 1925, p. 228), who record twelve illustrative cases illustrating the various methods of treatment of pulmonary gangrene, come to the following conclusions: (1) Serum treatment, and Weinberg's antigangrene serum in particular, gives only very inconstant results. None of the cases so treated showed an undoubted or permanent improvement. In his recent thesis Briault has come to the conclusion that antigangrene serum is not specific, and has shown that while temporary improvement is frequent a permanent cure is rare, only one such example, reported by Lemierre, being on record. (2) Arsenical treatment, advocated by Perrin of Nancy, also proved a failure in the authors' hands. Vincent's fuso-spirillar symbiosis is only transient in pulmonary gangrene, so that the indications for this mode of treatment are very restricted. (3) Auto-vaccines proved quite useless. (4) Tincture of garlic showed only a slight antiseptic action when given by the mouth. (5) Repeated intratracheal injections of gomenol oil in progressive strengths of 5 to 10 per cent. may produce slow but steady improvement. (6) Artificial pneumothorax is often difficult if not impossible owing to the early formation of pleural adhesions. Though it has been successful when employed at an early stage by Dumarest and Bonafé and Ameville and Teisseire, the present authors never derived any benefit from it. (7) The formation of a tracheal fistula deserves to figure in the therapeutics of pulmonary gangrene, as its indications, though limited, are real. (8) Intrapulmonary injection of drugs in oily suspension is valuable when other methods fail. (9) Surgical intervention is only rarely indicated. Death often occurs very rapidly after operation. (10) Phrenicotomy is chiefly indicated in bronchial dilatation. In the authors' experience it produced only a very temporary improvement.

158. Insulin Treatment.

L. HERTOGHE (*Le Scalpel*, January 9th, 1926, p. 25) remarks that though the value of insulin treatment remains indisputable, yet the difficulties associated with its administration are more obvious now than was the case hitherto, and its field of utility has diminished. Thus, apart from renal glycosuria, there are cases of pancreatic diabetes in which degeneration of the islands of Langerhans has gone so far that insulin treatment is ineffective. Again, a hyperglycaemia which is yielding to insulin may be complicated by the presence of renal glycosuria, which is resistant. Difficulty in assessing the value of insulin is caused by its cumulative action, which results in there being considerable delay after a course of treatment before the patient feels the full benefit or begins to relapse. The symptoms of developing hypoglycaemia Hertoghe puts in the following chronological order: first, disquiet and nervousness; then pallor, tachycardia, and sweating; and lastly, syncope, convulsions, and coma. He adds that there is no risk involved in the prophylactic use of sugar, and great care should be taken that this safeguard is available. The author recommends that a hypodermic syringe should be kept ready for injecting carbohydrate in an emergency.

159. Protein Therapy in Diabetes Mellitus.

G. SINGER (*Wien. klin. Woch.*, January, 1926, p. 28) reports further cases of diabetes treated by protein shock. During the last two years 92 cases were treated, with the following results: considerably improved 51, improved 22, not improved 17, made worse 2. The first criterion of improvement was the increase in sugar tolerance. In one case before treatment started the ingestion of 60 grams of white bread produced 18 grams of sugar in the urine. After treatment, 180 grams of white bread were ingested without glycosuria. The second criterion was the duration of improvement; this had persisted for twelve to twenty-two months. The author found that skin complications, such as furunculosis and gangrene, were particularly favourably influenced. The patient is placed upon a low carbohydrate diet of sufficient calories, and is given 0.5 gram novoprotein as an initial dose. The dose is increased by 25 to 50 per cent. each time, and injections are given every other day at the commencement, later every fourth day. As the glycosuria diminishes or disappears carbohydrates are added to the diet. The author attributes the improvement to a better metabolism of sugar. In conjunction with A. Fischer he conducted experiments on dogs with phloridzin glycosuria, which when treated by protein shock therapy showed a marked decrease in the nitrogen-sugar ratio in the urine. The author considers this method an improvement on insulin treatment because of its simplicity and the lasting improvement.

160. The Therapeutic Use of Infra-red Rays.

C. BENOIT (*Revue d'Actinothér.*, October–December, 1925, p. 61) states that the infra-red rays which immediately succeed the red or red-black rays in the spectrum have a much greater power to penetrate the tissues than the ultra-violet rays, their penetration being 1 to 3 cm., and even more when the irradiation can be prolonged. The penetration diminishes as the wave-length increases. The tissues show a varying degree of permeability by the infra-red rays. After the skin the muscular tissue is most readily permeated, and then the cellular tissue, aponeuroses, and bones. Blood, on the other hand, absorbs and arrests the rays. Serous membranes which contain a certain quantity of fluid, and especially morbid effusions, show considerable resistance to the rays. The penetration of the rays varies with the sensitiveness of the subject under treatment, some tolerating the sensation of heat better than others. Infra-red rays give rise to intense hyperaemia with redness of the skin in the zone irradiated. The redness is sometimes uniform, but may present dark streaks on a lighter background. The redness persists for a long time, as a rule two to three hours, and sometimes eight to ten hours, and then progressively fades, the darkest streaks being the last to disappear. The local temperature after cessation of the irradiation sometimes remains high for as long as two hours. Infra-red rays have an important action on the blood vessels and their contents, causing marked vaso-dilatation, a progressive increase in the number of red corpuscles, a marked diminution of the leucocytes, and an increase in the temperature of the plasma. Lastly, they exercise a remarkable analgesic effect, which is due partly to the hyperaemia and vaso-dilatation accompanying the irradiation and partly to the action of the radiations on the nerve endings in the dermis.

161. Dietetic Treatment of Gastric Ulcer.

A. J. JAROTZKY (*Therap. Gazette*, December 15th, 1925, p. 837) discusses the dietetic treatment of ulcer of the stomach and advocates a diet limited to white of egg in the morning and butter in the evening as giving the most perfect rest to that organ. The uncooked white of one egg, without salt and not beaten up, is swallowed in the morning and three-quarters of an ounce of unsalted fresh cream butter in the evening. On each of the following days the number of eggs is increased by one and the amount of butter by three-quarters of an ounce until eight eggs and six ounces of butter are being given; no other food, drink, ice, or medicine is allowed by the mouth. By the limitation of drinking the secretion of gastric juice is delayed and the deficiency of water in the organism can be overcome by the rectal administration of water and sugar. By such means the disadvantages of the milk treatment are obviated and the closure of the pylorus which occurs as soon as milk or yolk of egg reaches the duodenum is avoided. The time of retention of food in the stomach is thus reduced to a minimum and the stomach remains contracted instead of distended. Jarotzky claims that this method alleviates pain quickly and that the feeling of epigastric distension is soon abolished. Such a diet, he adds, can be given with advantage even in the presence of haemorrhage, and there is no need for it to be preceded by a period of starvation.

162. The Gold Treatment of Surgical Tuberculosis.

SIEDAMGROTZKY (*Zentralbl. f. Chir.*, No. 47, November 21st, 1925, p. 2642) has employed two German substitutes for sanocrysin—krysolgan and triphal; the gold content of both of the German preparations is similar. The largest single dose employed was 40 c.cm. of a 1 per cent. solution (0.04 gram of the solid gold preparation); this dilute solution had no injurious effect on the kidneys. Siedamgrotzky gives the results of treatment in 26 cases of various forms of surgical tuberculosis. In 6 cases the treatment was ineffectual; 15 patients improved under treatment; and 5 patients, with tuberculosis of the bones or joints, were cured. He used a 1 per cent. solution of the gold preparation in normal saline solution, and as the injection might be very painful infiltration anaesthesia was induced prior to injection. A very fine needle was used. In children the author did not administer more than 40 c.cm. as an initial dose, nor more than 10 to 20 c.cm. at subsequent injections, which were repeated at intervals of fourteen days.

163. Osmotic Therapy in Glaucoma.

W. S. DUKE-ELDER (*Brit. Journ. Ophthalmol.*, January, 1926, p. 30) describes four cases of acute glaucoma treated by intravenous injection of a 30 per cent. solution of sodium chloride. The dose was calculated as 1 c.cm. per kilo body weight and the average adult dose was about 50 c.cm. of this solution. The fluid was injected slowly and evenly for a period of ten minutes, with the patient recumbent so as to obviate any danger from the sudden drop in blood pressure which occurred. The general dehydration of the tissues which followed appeared to cause little discomfort and was easily combated by free administration of fluids by mouth. The effect of this treatment was to reduce speedily and effectively the tension of the eye. The effect was not permanent and the tension tended to rise again in the course of the next twenty-four hours. Duke-Elder, however, considers it a very useful method of tiding over the emergency of an acute glaucoma.

Neurology and Psychology.

164. Mental Changes in Encephalitis Lethargica.

G. A. AUDEN (*Journ. Mental Sci.*, October, 1925, p. 647), discussing the psychological implications of encephalitis lethargica, points out that while its acute stages may be so indefinite as to render a diagnosis not always possible, the later manifestations are so constant that they form a syndrome which is characteristic of a distinct morbid entity. Limiting his observations to children between 5 and 15 years of age, attention is called to the frequency with which moral changes and failure of adjustment to their social environment supervene together with outbreaks of spitefulness and disobedience, noisy excitability at night, destruction of clothes, and frequent tics and habit spasms. Experience in juvenile delinquency points to the basic causal factor in many of these cases being a suppression of discrimination and intelligent self-control, so that it seems reasonable to conclude that the lesions in encephalitis lead to a reduction of such control comparable by analogy with the geological process of denudation whereby younger sedimentary rocks become removed by various physical actions laying bare the ancient primitive rocks upon which they had been deposited. Such changes in behaviour following an attack of encephalitis can be explained as regressions similar to those which sometimes follow other acute infections and disease or injury to the brain. If this explanation is correct little or no deterrent effect can be expected from punishment, which rather may produce disastrous results by the fixation of an antisocial attitude; commitment to reformatories is therefore deprecated. Auden maintains that one of the most pressing needs of the time is the establishment of special institutions in which, by a simple regulated life, these patients could regain self-control without being handicapped by the stigma of judicial proceedings.

165. Etiology of Dementia Praecox.

S. KURE and M. SHIMODA (*Journ. Nerv. and Mental Dis.*, December, 1925, p. 597) give the statistical results of an investigation of the various conditions which might have affected the brain before the onset of dementia praecox. In 47.2 per cent. of the cases there was evidence of heredity being a definite factor, and though different figures have been given by other observers all agree that this factor is traceable in a large percentage of dementia praecox patients. The present authors found that 46.2 per cent. of the patients had parents who were addicted to alcoholism; this contrasts with the percentages of 20, 25, and 26 of other observers. There was a previous history of convulsions in childhood in 8.4 per cent., while histories of trauma, poor development, and disease were obtained in a large number of cases. Poor intellectual development characterized 21.9 per cent., and 15 per cent. showed significant physical abnormalities. The authors conclude that at least 80 per cent. of the patients were abnormal prior to the onset of dementia praecox, which would appear to exclude coincidence.

166. The Plantar Lines in Mental Defectives.

T. BRUSHFIELD (*Brit. Journ. Child. Dis.*, October–December, 1925, p. 274) remarks that though the hands of mental defectives have been studied and their various characteristics described, especially in mongols, no similar description of the foot and its markings is available. In a study of the foot in the mongol and other varieties of mental defectives, of whom 618 in all were examined, Brushfield noted the following lines: *Crease lines*—(1) transverse, caused by flexion; (2) longitudinal, caused by the movement of bringing all the toes together; (3) a delicate network of lines. *Plantar lines* or folds—namely, the oblique plantar line, the transverse plantar line, and the transverse hallucial line. The oblique plantar line, which is an almost constant feature of the mongol, commences in the cleft between the first and second toes and runs obliquely outwards to end about the ball of the big toe. From this point the transverse plantar line and transverse hallucial line run outwards and inwards respectively to the outer and inner borders of the foot. In addition to the oblique plantar line a characteristic feature of the foot in the mongol is a wide gap between the first and second toes. In normal children, as was found by

examination of over a hundred cases, these lines are all rudimentary, and generally become obliterated after the third to the fifth year, whereas in mental defectives they persist up to the fourteenth year. Brushfield maintains that owing to the constancy and persistence of these lines in mental defectives they should always be looked for and their presence regarded as a stigma.

Obstetrics and Gynaecology.

167. Full-Term Ectopic Gestation.

J. M. H. ROWLAND (*Surg., Gynecol. and Obstet.*, January, 1926, p. 50) reports a case of extrauterine pregnancy which went to full term, and resulted in a living child. The diagnosis was made by a vaginal examination after the patient had been reported to have been in labour for two days, the head of the child being discovered in the pelvis, but not in the vagina. At the operation the placenta was found attached to the posterior surface of the uterus and the broad ligaments, some small extensions being fixed to the mesentery and folds of the small intestine by light adhesions. A well developed normal child, weighing 8½ lb., was delivered, and the patient made a good recovery, the only complication being a slight infection of the operation wound. Rowland believes that the development of the head must have been entirely in the pelvis in this case; the uterus had been completely displaced from the pelvis. The placenta, apart from a few small extensions, was an almost exact quadrilateral mass. Rowland adds that the case illustrates the importance of a very careful supervision of pregnant women and consideration for a history of irregular haemorrhage early in pregnancy. Pelvic examination at any time before labour would in this case have disclosed the absence of the cervix.

168. L. HERTZENBERG (*South African Med. Record*, December 26th, 1925, p. 560) describes a case in which an extrauterine pregnancy went to full term, the dead foetus being removed by operation from the abdominal cavity. He concludes that the extrauterine pregnancy had ruptured, but the ovum had survived and continued to live in the abdominal cavity up to full term, when spurious labour set in. The woman made a good recovery.

169. Insulin and Pregnancy Glycosuria.

H. ELIAS, J. GÜDEMANN, and R. ROUBITSCHEK (*Wien. Arch. f. inn. Med.*, November 1st, 1925, p. 567) state that hitherto two views have been held as to the pathogenesis of glycosuria in pregnancy. According to the first view, which is maintained by Porges, Novak and Strisower, Frank, Frank and Nothmann, Nothmann, Guggisburg, Roubitschek and others, it is mainly due to a greater permeability than usual of the kidneys, with relatively slight increase in the blood sugar. Others, such as Rosenberg, Umber, Lepine, Hofbauer, von Noorden, and A. Gottschalk, hold that there is an hepatic insufficiency which causes a disturbance of carbohydrate metabolism, so that the liver is unable to store up as glycogen the sugar which has been brought to it. The present authors carried out an investigation on women in the third and fourth months of pregnancy and came to the following conclusions: (1) Small doses of insulin often increase the normal blood sugar. (2) After intravenous injection of sugar the blood sugar increases in the same degree in the normal and the pregnant woman. An intermediate factor in the form of damage to the liver could not be demonstrated to account for the glycosuria of pregnancy. (3) After injection of insulin the raised blood sugar level in pregnancy and menstruation sinks less than in normal subjects.

170. Surgical Treatment of Contracted Pelvis.

C. VERCESI (*Ann. di Ostet. e Ginecol.*, November 30th, 1925, p. 764) states that Costa's operation for contracted pelvis has now been performed about sixty times by Italian surgeons. The whole thickness of the symphysis pubis, including periosteum, cartilage, and ligaments, is now removed between the pubic spines and reaching from 1 to 1.5 cm. below the upper margin of the symphysis. The permanence of the consequent enlargement of the pelvic brim has been demonstrated radiographically and otherwise; there has been no maternal mortality, and difficulty in walking followed in one case only. Summaries are given of 16 cases operated on before and 42 during labour. Death of the foetus during or shortly after birth occurred in 11 instances. With regard to the scope of the operation, which has been almost entirely restricted to the flat type of pelvis, Vercesi is unwilling to define the precise arithmetical limits of the conjugata vera which are suitable or unsuitable. Each case demands separate consideration, especially with regard to the age, obstetric history, condition of the soft parts, and probable or ascertained foetal dimensions. In general, he concludes, Costa's operation may be expected to give entirely favourable results with a conjugate not less than 83 mm.; with a conjugate of 83 to 80 mm. the operation is still definitely useful, especially if delivery is subsequently accelerated by forceps or version. With conjugates of 80 to 75 mm. Caesarean section is in general preferable, but may well be followed by Costa's operation in order to facilitate delivery in subsequent labours. In comparison with symphysiotomy or pubiotomy the operation, besides giving permanent pelvic enlargement, is easy, safe, and unattended with inconvenient sequelae. The alternative method of enlarging the bony pelvis consists in resection of the sacro-vertebral promontory, as suggested by Rotter in 1912, employed shortly afterwards by Schmid, and practised later by Mangiagalli: this demands a true conjugate exceeding 75 mm., and except as a complement to Caesarean section is inapplicable to cases in labour. Vercesi records two additional cases in which this operation has been successfully performed, giving rise to enlargements of the conjugate of 6 and 11 mm. respectively. He mentions that Fossati has twice seen spontaneous delivery follow an old operation of this nature.

171. X Rays in Obstetrics.

R. MITCHELL and M. R. MACCHARLES (*Canadian Med. Assoc. Journ.*, November, 1925, p. 1202) discuss the value of *x* rays in the practice of obstetrics. They state that while numerous observers have found it possible to produce changes in the embryo by means of long exposures to the *x* rays, yet the momentary exposure necessary for the production of a radiogram is probably harmless, and the present authors have never had a single case of physical or mental maldevelopment result. They point out that *x* rays can be of great assistance in examining the general conformation of the pelvis. During pregnancy they have found the rays to be of greatest assistance after mid-term, which is usually the earliest time when the foetal skeleton can be distinguished. The position of the foetus and its presenting part can be determined, and a twin pregnancy be recognized. *X* rays can also be used in cases of illegitimate pregnancy or pseudocyesis. Foetal abnormalities, such as hydrocephalus and spina bifida, or death, can also be diagnosed by this means, and trouble in delivery may be avoided by perforation if necessary. After delivery *x* rays can be used to demonstrate injuries to the pelvis of the mother, or fractures and dextrocardia in the child. For the purpose of radiography the authors place the patient in the prone position with the chest and thighs supported; the factors used are 10 milliamperes current, 87 kilovolts, and 15 seconds exposure through a Bucky diaphragm.

172. Conservation of Menstruation after Hysterectomy.

ROUFFART-THIRIAR (*Bruxelles-Médical*, January 3rd, 1926, p. 316) discusses the value of the uterine transplantation of an ovary in preserving menstruation and a limited degree of fertility after double salpingectomy and states that the mortality of the procedure is negligible. Subsequent pregnancy may, he finds, be expected in up to 10 per cent. of cases, but more than one subsequent pregnancy has not been reported. Persistence of menstruation was observed in 26 out of 27 patients; in the one exception it was only possible to transplant a very small piece of ovarian tissue. Ten women complained later of pains in the side, and three of them were operated on again, when the implanted ovarian tissue was found to have become cystic. Four became pregnant, two aborted at the third or fourth month, and the other two gave birth to healthy children. One of Tuffier's cases developed acute intestinal obstruction after the lapse of nine months, and at a spot remote from the former pelvic operation. Hysterectomy was performed and histological examination of the implanted tissue showed that ovulation had occurred. The author thinks that the number of subsequent pregnancies would have been higher had more of the patients desired offspring.

173. Tubal Insufflation in Sterility.

R. POLLART (*Bruxelles-Médical*, January 10th, 1926, p. 353), discussing the value of tubal inflation in the differential diagnosis of sterility and certain types of dysmenorrhoea, prefers filtered air to the more usual carbon dioxide. He finds that after injection of 100 c.cm. or more into the uterus and the peritoneum there is no reaction and the air is absorbed quickly. Careful preliminary examination of the pelvic organs is necessary in order to avoid the danger of forcing infective material into the peritoneum. When the tubes are normally patent air passes into them at a pressure of 80 to 100 mm. of mercury, but should the pressure rise to 200 mm. it is certain that the tubes are impermeable. It is possible to determine in some cases that one tube is patent and the other closed. The patients tolerated the procedure well as a rule, but some complained of abdominal pain for

two or three hours subsequently; these patients usually had impermeable tubes. Poliart gives details of its use in 22 patients, of whom only 3 had previously borne children; impermeable tubes were found in 16 cases. Of the other 6 patients one, previously nulliparous, became pregnant a few months later, and another, who had had one child, also became pregnant after insufflation. Although the remaining four patients had no tubal obstruction their sterility persisted.

Pathology.

174. Chemical Changes in the Intestine.

N. J. NOVELLO, W. WOLF, and C. P. SHERWIN (*Amer. Journ. Med. Sci.*, December, 1925, p. 888) have investigated the chemical defence of the animal and human body against the products formed in the process of intestinal putrefaction. They find that as a rule there is an initial effort to oxidize completely such products and if this is not successful an attempt at reduction follows. Should both fail the organism tries to attach the toxic substance to a compound or radicle which will decrease the toxicity and increase the solubility, thus making possible the rapid elimination of the resulting compound in the urine. The authors believe that the products of intestinal putrefaction are much less toxic than has been generally thought and that some of these substances are harmless. The putrefactive products usually formed are indol, skatol, phenol, imidazol, and imidazol acetic acid. The authors fed individuals on these substances under experimental conditions, and their urines were examined at twenty-four hour intervals. Skatol was found to be slightly more toxic than indol, 0.1 gram producing a feeling of nausea but no vomiting, loss of appetite, belching, and a dull headache which lasted for at least twelve hours after the dose. Phenol caused no untoward effects. Imidazol compounds produced an increase in the pulse rate of 10 to 20 a minute. The authors consider that glycuronic acid serves only in a minor capacity as a detoxicating agent for indol and is apparently used only after the sulphate supply has been nearly exhausted. The greater part of the indol is excreted uncombined. They find Jolles's test superior to that of Obermayer for the estimation of indican. They state that skatol is mainly detoxicated by union with sulphuric acid, very little being excreted unchanged or in combination with glycuronic acid. Phenol is also detoxicated chiefly by sulphuric acid, which seems to be derived not only endogenously but also exogenously from cystine, so that the percentage of phenol excreted in this way is dependent on the amount of cystine in the diet, and, therefore, the amount of ethereal sulphate excreted is no indication of the amount of phenol present. Imidazol and imidazol acetic acid appear to be split into uric acid, urea, and ammonia.

175. Spirochaetal Infections in Vienna Rats.

I. TAKAKI (*Wien. klin. Woch.*, November 12th, 1925, p. 1231), of the State Serotherapeutic Institute at Vienna, states that the *Spirochaeta icterohaemorrhagiae* has been found in rats in most of the large towns in all countries. In Germany, for instance, Uhlenhuth and Zuelzer found it in 10 to 50 per cent. of the rats, while Noguchi in Quajaquil found an incidence of 67 per cent., and Smillie in Sao Paulo one of 75 per cent. In three out of eight healthy rats examined in Vienna Takaki found the *Spirochaeta icterohaemorrhagiae*. Spirochaetosis icterohaemorrhagica was successfully transmitted to healthy guinea-pigs by inoculation of the organs of the infected rats, and the spirochaete was demonstrated in the blood and organs of the inoculated guinea-pigs by dark-field illumination and Giemsa's stain. In another case after inoculation of the blood of a healthy rat into mice it was possible to find the *Spirochaeta morsus muris*, or organism of rat-bite fever, in the blood of the inoculated animals. It is therefore obvious that rats in Vienna, as in other countries, may be carriers of spirachaetosis icterohaemorrhagica and rat-bite fever. Systematic measures for the destruction of rats are, therefore, required in Austria, and especially in Vienna, such as have been taken in other countries, including Great Britain and Denmark.

176. Stages in the Development of the Tubercle Bacillus.

F. BEZANÇON and A. PHILIBERT (*Presse Méd.*, January 9th, 1926, p. 33), from a study of the structure of growing colonies of the tubercle bacillus, have come to the following conclusions as to the development of this organism. The surface membrane which is formed on liquid media was fixed in alcohol, embedded in paraffin, and cut into thin sections, which were stained either by Ziehl-Neelsen or by Fontès's method with Gram's stain, fuchsin, and methylene blue. Examination of these sections showed that the greater part of the membrane consisted of a network formed of fibrils arranged parallel to the surface; they did not show true branching, and they were decolorized. For this reason they call it the cyanophilic substance. On the under surface of the membrane a variable number of acid-fast bacilli were seen lying parallel to the fibrils of the network; on the upper or free surface, and in that part of the membrane which extended up on to the walls of the flask, there were none to be seen. In some of the bacilli there were granules, similar to those described by Babès, which took on the Gram stain with great avidity; for this reason the authors call them the chromophilic corpuscles. The granules were not confined to the bacilli; they could often be seen lying free in the cyanophilic network, disposed in long rows. Examination of cultures of different ages showed that in very young membranes there was nothing but cyanophilic substance. After sixteen to twenty-five days acid-fast bacilli appeared containing chromophilic granules. In a culture aged sixty days the bacilli were few in number, but there were numerous granules lying mostly in the network. Finally, after two hundred days there were practically no bacilli; the cyanophilic membrane had lost its striation and was riddled with granules. From this they deduce that in the course of growth non-acid-fast filaments are first formed; these are transformed later, partly into acid-fast bacilli, which are finally replaced by chromophilic granules. The acid-fast bacilli appear to be only one stage in the life-history of the tubercle bacillus. The observations afford some explanation of the well known fact that acid-fast bacilli are often hard to find in tissue sections, and of the recent reports that tuberculous pus which has been filtered through a Berkefeld candle may yet be infective to guinea-pigs.

177. Action of Ultra-violet Light on Tissue Cultures in Vitro.

S. KIÆR (*C. R. Soc. de Biologie*, December 4th, 1925, p. 1389) exposed a pure culture of connective tissue *in vitro* to the action of ultra-violet light. The culture was placed in a water-bath at a temperature of 38° C., and was separated from the source of light—a Kromayer lamp—by 3 cm. of water, a quartz square, and 3 cm. of air, to exclude the heat rays. Exposure of a twenty-four hour culture for five minutes did not affect the subsequent growth of the tissue, but an exposure of eight minutes decreased the rate of growth during the next twenty-four hours; on subculture after this period the tissue grew normally. An exposure of one hour retarded the growth in such a way that the tissue did not recover its original rate of proliferation till after two or three subcultures had been made. Finally an exposure of two to three hours definitely killed the fibroblasts. It was expected that a very small dose might actually stimulate the growth, but this was never observed, even with exposures of 0.5 second. From these experiments it appears that the action of the ultra-violet rays is to injure the cells; the lethal dose is about ten to fifteen times the inhibitory dose. In another paper (ibid., p. 1391) the author describes the use of embryonic chick heart. With this tissue he found that a small exposure of fifteen seconds to two minutes increased the rate of contraction. After a short lag period the heart cells began to beat faster; return to the normal rate occurred in three to twenty minutes. To show that this accelerating action was due to the ultra-violet rays themselves, he replaced the quartz square by a piece of glass which would filter off the rays; exposure under these conditions was without effect. Further, by covering the tissue with China ink, he found that the rays had no effect, showing that the action was not due to the production of a change in the surrounding medium. It may be concluded that the accelerating action of the rays on heart muscle is the result of the ultra-violet light itself.

178. Glycaemia in the Newborn.

L. AURICCHIO (*La Pediatria*, December 1st, 1925, p. 1274) examined the blood sugar in 18 normal newborn children aged from 1 to 10 days, investigating the alimentary glycaemia in 10 and the adrenaline glycaemia in 8. The alimentary glycaemia was tested by giving the infant a gram of glucose per kilo of body weight in 10 c.cm. of distilled water, and the adrenaline glycaemia by intramuscular injection of 0.2 per cent. of 1 in 1,000 adrenaline solution. The results were as follows: The newborn child even before it has received its first feed has a glycaemia almost equal to that of the adult. Ingestion of glucose produced an increase in the amount of glycaemia, which became appreciable in fifteen minutes, and reached its maximum in half an hour, and then diminished. Two hours later the glycaemia had returned to its original level. The maximum increase was from 50 to 100 per cent. Injection of adrenaline was followed by a marked and prolonged increase of glycaemia. Fifteen minutes after injection the initial value was doubled, and it was not until two hours later that the glycaemia began to diminish. These findings show that in the normal child the regulation of glycogen starts at birth.

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

179. Tuberculous Peritonitis in Children.

C. GIAUME (*La Pediatria*, January 1st, 1926, p. 1) has investigated 450 cases of tuberculous peritonitis in children. He found the disease most common between the ages of 4 and 6 and relatively rare in infancy; 60 per cent. of his patients were boys, and the disease mostly started in the earlier months of the year, rarely in the summer. It was usually associated with other tuberculous manifestations, and the infection seemed to be traceable to the circulation or to primary tracheo-bronchial tuberculosis. A family history of tuberculosis could be traced in 40 per cent. of the infantile cases and in 16 per cent. of the older children. The importance of measles and whooping-cough as predisposing causes was clearly shown, even allowing for the great prevalence of these diseases. Giaume finds that in diagnosis the von Pirquet reaction is helpful, though it was negative in 32 per cent. of the children under 1 year and in 25 per cent. of the older children. In early infancy the symptoms are often obscure, the course more rapid, and the prognosis worse; in many cases ascites was the only symptom. The ascitic type was present in about 70 per cent. of children between the ages of 2 and 5, while in those under 1 the ascitic and fibrocaseous forms were about equally present. In a third of the cases some other tuberculous localization was clinically demonstrable. The mortality in the caseous type was as high as 75 per cent., but the prognosis in the ascitic forms was fairly good. Surgical treatment of the ascitic form is now reserved for prolonged and obstinate cases. Heliotherapy and tuberculin therapy have given good results, but the former is contraindicated in rapidly progressive cases with high fever. The author refers to the pseudo-ascites due to collections of intestinal fluids in loops of bowel.

180. Recrudescence of Encephalitis in the Parkinsonian Stage.

J. FROMENT and P. DELORE (*Lyon méd.*, December 20th, 1925, p. 753) record the case of a woman who, two years after the onset of Parkinsonism and seven years after the onset of encephalitis, developed a fresh attack of somnolence and fever. The amount of sugar in the cerebro-spinal fluid during this stage rose from 0.65 to 0.85 gram per 1,000. There was a considerable increase of rigidity. Injections of urotropine, which had been employed in the primary attack, were resumed, with the result that the fever and somnolence disappeared and the rigidity became less pronounced. This case may be compared with that previously reported by Guillain, Alajouanine, and Célice, illustrating the contagiousness of epidemic encephalitis in the Parkinsonian stage. The present authors conclude that epidemic encephalitis, which is a chronic disease, should be subjected to a prolonged treatment, and that urotropine, which in the absence of a specific remedy is a really active drug, should be administered for several years with short interruptions.

181. Relapsing Cerebro-spinal Fever.

C. ZOELLER (*Bull. et Mém. Soc. Méd. des Hôp. de Paris*, November 26th, 1925, p. 1473) records a case of cerebro-spinal fever in a young sailor in whom the disease ran its course in three successive stages. The first, in which the symptoms assumed the form of a meningeal reaction, lasted a week, the cerebro-spinal fluid being clear and aseptic and containing only a few lymphocytes, a slight and transient excess of albumin, and sugar not below 0.62 per litre. After an interval of twenty days a second stage developed, characterized by recrudescence of the meningeal symptoms. The cerebro-spinal fluid now showed polymorphonuclear leucocytes and a few diplococci. In each of these two stages signs of general infection were present in the form of herpes facialis and purpura in the first stage and of herpes facialis alone in the second stage, without it being possible to find meningococci in the blood. The lowest amount of sugar in the second stage was 0.56 gram per litre. Finally, after an interval of two and a half months, a fresh attack occurred which lasted about a month and was much more severe in character. An organism was isolated from the cerebro-spinal fluid and proved to be meningococcus A. Recovery followed repeated lumbar puncture, serum treatment, and vaccine therapy. The case was therefore a typical example of relapsing cerebro-spinal fever. Zoeller states that it is not exceptional to find a clear cerebro-spinal fluid in meningococcal meningitis, either at the onset or at an advanced stage of the disease, as has been noted by Dopter and Netter and Debré. In the first attack the meningococci were probably localized in some part of the cerebro-spinal axis or in the accessory nasal sinuses, and produced a meningeal reaction which subsided of itself. In the second stage the meningeal reaction was more violent and gave rise to a puriform effusion with a few meningococci. In the third stage there was typical meningitis with the presence and persistence of meningococci in the cerebro-spinal fluid. The changes in the cerebro-spinal sugar in the case were of interest. During the first two stages it was remarkably high, and in the last stage very irregular, ranging from 0.17 to 0.50 gram, according as the first or last cubic centimetres of the fluid withdrawn were examined. Zoeller thinks it probable that the specimens of fluid came from different parts of the cerebro-spinal axis, in some of which the inflammatory process was still active, while in others it was tending to subside.

182. Diagnosis of Congenital Syphilis.

SABOURAUD has maintained since 1917 that the "mammillary eminence," a supernumerary cusp springing from the palatine surface of the first upper molar, is an indication of hereditary syphilis if it is well developed, pointed, and separated from the tooth by a subjacent groove. E. JANÉ (*Ann. de Derm. et de Syph.*, December, 1925, p. 734), who has been working in Sabouraud's laboratory, now reports the examination of 29 patients with this dental peculiarity. In 17 cases the Wassermann reaction was positive, and in 12 other cases in which it was doubtful or negative 9 patients exhibited other stigmata of syphilis. Jané concludes, therefore, that confirmation is provided of the truth of Sabouraud's suggestion, and draws attention to the absence of variation in skeletal structures when no congenital infection, such as syphilis, is present, which produces such malformations by interference with ossification. Some of the signs attributed to congenital syphilis appear to be reversions to prehistoric ancestral types: thus the sabre-shaped tibia was normal in the Cro-Magnon race. Jané claims that the mammillary eminence is a special transformation of the tubercle of Carabelli, which is an abnormal development of the primitive enamel belt on the internal surface of the first upper molar. A fifth cusp may have existed normally on this molar in prehistoric races. Jeanselme has shown that the rudiment of this tubercle is recognizable in many other teeth than the first upper molar, and that it is a normal feature in lemurs, whose dentition, like that of chimpanzees, resembles most closely the human type.

Surgery.

183. Ligature of the Jugular Vein in Pyaemia.

P. RIESS (*Zentralbl. f. Chir.*, December 5th, 1925, p. 2755) describes three cases of pyaemic sinus thrombosis treated by tying the jugular vein. In a man aged 26 severe left tonsillitis was followed by diffuse cellulitis of the same side of the neck, high pyrexia, and rigors. Under ether anaesthesia the internal jugular vein was tied just above its junction with the left subclavian vein, since the tissues were so inflamed that it was impossible to isolate the internal jugular vein in the neck. The vein was then opened, the septic thrombus removed, and a rubber drainage tube was inserted. The wound healed in six weeks. In the second case, a man aged 21, severe pyaemic infection followed the removal of adenoids; there were frequent rigors and high pyrexia, with much brawny infiltration and cellulitis of the right side of the neck. The right internal jugular vein was ligatured at its deepest part. The rigors ceased immediately after the operation, but there was protracted suppuration in the wound and the patient had pyaemic abscesses in the sacral and femoral regions. He finally recovered. The third patient, aged 29, was admitted with cellulitis in the left temporal region, following a carbuncle which had been opened four weeks previously. The swelling returned three days before admission, and was accompanied by rigors and headache. The swelling was incised. The patient was very ill; he was semiconscious, with high temperature and rapid pulse, and was evidently suffering from thrombo-phlebitis. The left jugular vein was ligatured and the mastoid process was explored, but no focus of suppuration was found. The patient

had recovered completely five weeks after admission. Riess observes that the number of these patients who recover under expectant treatment is so small that early surgical intervention should be regarded as routine treatment.

184. Acute Typhoid Cholecystitis Forty-one Years after Typhoid Fever.

L. A. POMEROY and J. K. SHEN (*Amer. Journ. Med. Sci.*, December, 1925, p. 881) record the case of a man, aged 57, who had had an extremely severe attack of typhoid fever at the age of 16 complicated by intestinal haemorrhage, when he was attended by Pomeroy's father. He remained in good health for the next forty-one years, and then developed symptoms of acute cholecystitis which required operation. The gall bladder was found to be acutely inflamed, and on aspiration yielded a mixture of blood and pus. Owing to the patient's condition it was considered better to drain the gall bladder than to remove it. Cultures of the bile yielded a pure growth of *B. typhosus*, but the Widal test was negative for *B. typhosus* and *B. paratyphosus* A and B. Cultures from the stools were also negative. The authors believe that this case presents the longest interval on record between the original attack of typhoid fever and the recovery of *B. typhosus* directly from the gall bladder. When the patient was last seen, two months after the operation, the sinus still discharged slightly at intervals a fluid containing *B. typhosus*, while the stools remained negative.

185. Rectal Diverticula.

G. FANTOZZI (*Arch. Ital. di Chir.*, October, 1925, p. 418), who records an illustrative case, states that the first example of this rare condition was described in 1762 by Morgagni, who spoke of a diverticulum "somewhat smaller than a fig situated two fingerbreadths above the anus." Physick of Philadelphia in 1836 gave the name of "encysted tumours" to formations which subsequent writers called ulcers of a tuberculous, syphilitic, or dysenteric nature affecting the solitary follicles. Under the name of "sacciform disease of the anus" Gibson and Gross described a dilatation of the anal region corresponding to the crypts of Morgagni. Fantozzi's patient was a woman, aged 56, who for the last two years had noticed a small round painless swelling in the left labium majus. Eighteen months later some other small swellings appeared and all united to form a single lump. The part then became painful, there was an evening rise of temperature, and some oedema of the lower limb occurred. There was no disturbance of micturition or defaecation. Examination of the vagina was negative. Rectal examination, on the other hand, showed on the anterior wall above the sphincter a depression which appeared to be the opening of a cavity connected with the tumour in the labium. Under ether anaesthesia the labium was incised and the diverticulum containing a coprolith was removed. Complete recovery took place. The histological and clinical study of the case showed that the diverticulum originated in a congenital anomaly. Fantozzi has been able to find only two similar cases on record, reported by Terrier (1889) and Neumann (1896) respectively.

186. Ectopic Thyroid Tumours in the Neck.

F. FEDELI (*Arch. Ital. di Chir.*, September, 1925, p. 167), who has collected 53 cases from literature as well as 3 which came under his own observation, states that cysts and tumours presenting the structure of the thyroid may develop in regions of the neck which are not the usual site of the thyroid gland. Of these cases 80 per cent. are found in females and 20 per cent. in males. The ages of the patients ranged from 10 to 76 years. Malignant changes never occurred before the age of 40. Goitrous inheritance, prolonged coughing, and various infections have been incriminated as causes of the condition. The symptoms may be classified into positive and negative. The positive are: (1) Their situation on the side of the neck; (2) position beneath the sterno-mastoid muscle; (3) roundish form; (4) multiple character; (5) lobulated surface; (6) slow development for a long period; (7) mobility in all directions; (8) independence of movements of deglutition; (9) soft consistence; (10) transient increase in size during menstruation; (11) frequent, sudden, and considerable increase in size; (12) transmitted pulsation; (13) presence of murmurs; (14) obstruction to circulation; (15) tendency to involve the vessels of the neck. The negative symptoms are: (1) absence of pain and tenderness; (2) absence of subjective symptoms; (3) absence of symptoms of hyper- or hypo-thyroidism; (4) absence of any effect on the general state of nutrition; (5) absence of glandular metastases. The growths must be distinguished from lymphosarcoma, aneurysm of the carotid or subclavian artery, fibroma, lipoma, and branchiogenic carcinoma. Treatment is exclusively surgical and consists in removal of the growth as soon as possible.

Therapeutics.

187. Subcutaneous Injection of Milk in Infants.

A. B. MARFAN and R. TURQUETY (*Paris méd.*, November 7th, 1925, p. 377), who have employed injections of milk on a large scale in the treatment of infants, though inclined to regard the early enthusiasm for the method as unwarranted, maintain that it may be of value in the following groups of cases: (1) the severe form of prurigo, or strophulus of former writers, when the ordinary methods of treatment have failed; (2) more or less generalized erythrodermia exfoliativa; (3) the very rare cases in which diarrhoea in breast-fed babies interferes with growth. In these cases the injection of milk hardly ever causes a violent or early reaction, so that there is a doubt as to their anaphylactic origin. Whether cow's milk or woman's milk is to be employed will depend on the mode in which the child has been fed. If combined feeding has been employed, cow's milk should be injected alternately with woman's milk. Woman's milk should be drawn off as aseptically as possible and injected undiluted. If there is a fear of its being contaminated, it is best to sterilize it. Cow's milk should be boiled for at least five minutes, but it is preferable to employ milk which has been completely sterilized in the autoclave. As it is impossible to determine beforehand the child's degree of sensitiveness, only a very small dose, such as 4 or 5 drops diluted in normal saline, should be given on the first occasion. If this dose does not produce any reaction, 1/2 c.cm. may be injected next day. Subsequent doses ranging from 2 to 5 c.cm. may be injected every two days until improvement has been obtained, but if none occurs after five injections it is useless to continue.

188. Blood Transfusion in Potassium Chlorate Poisoning.

A. BÉCART (*Bull. Soc. de Thér.*, November 11th, 1925, p. 254) reports the case of a woman, aged 55, who accidentally took 40 grams of potassium chlorate in mistake for sodium sulphate. The following morning she was awakened by severe abdominal pain; she vomited everything she took, and had suppression of urine. Numerous wet cups were applied to the lumbar region and gave issue to a thick brownish-black viscid blood which coagulated at once. Bécart, who was called to see the patient the next day, transfused 200 c.cm. of whole blood, and a few hours later she evacuated a few drops of black urine and spontaneously passed a motion of the same colour. The following day she passed 38 grams of urine which was less dark in colour. A second transfusion was performed three days after the first, and eight days after the accident the total amount of urine in the twenty-four hours was 165 grams. Improvement was gradual, and eventually complete recovery took place. Bécart adds that the case is of interest, first, in view of the rarity of recovery after so large a dose of potassium chlorate, and secondly, on account of the rapid destruction of the red corpuscles. Examination of the blood twenty-four hours after the drug had been taken showed that the red cells had fallen to 2,500,000.

189. Protein Therapy in Syphilis.

S. S. GREENBAUM and C. S. WRIGHT (*Arch. Derm. and Syph.*, December, 1925, p. 858) recall that a rise in the body temperature may serve to hasten the involution of the cutaneous manifestations of syphilis and that injections of protein may cause such a rise. They have, therefore, tried protein injections in conjunction with neo-arsphenamine for the treatment of syphilis. They treated 25 patients with injections of milk protein and neo-arsphenamine and 25 with the drug alone. The average number of injections of neo-arsphenamine required in the first series to produce a negative Wassermann reaction was 4.7, but in the second series the average number of injections was 7.5. The number of failures was less with the combined treatment than with the neo-arsphenamine alone. They found that protein injections alone produced involution of the skin lesions in some cases, and think that such non-specific therapy stimulates the natural defensive forces of the body. They believe that the combined treatment will be found of greatest service in latent syphilis where a strongly positive Wassermann reaction is the only symptom.

190. Ovarian Extract in Graves's Disease.

M. LAEMMER (*Bull. Soc. de Thér.*, October 14th, 1925, p. 216) states that when he first treated cases of Graves's disease he attributed more importance to preparations of the blood of animals from which the thyroid had been removed than to the ovary, whereas at present he does exactly the reverse, for the following reasons. A woman suffering from exophthalmic goitre has a genital sign, which is hardly ever absent—namely, irregular menstruation and often amenorrhoea. This fact is so important that some endocrinologists, especially Marañón, are of opinion that in the overwhelming majority of

cases of Graves's disease in women ovarian disturbance is also present, at least at first. This fact accounts for the predominance of the disease in the female sex. Moreover, it is well known how frequently symptoms of Graves's disease develop at the menopause. Guided by these considerations Laemmer has made a systematic use of ovarian preparations in the treatment of Graves's disease with very successful results, as shown by considerable improvement in the cardinal signs, and almost complete disappearance of the secondary signs. The method consisted in a series of fifteen to twenty injections of the fresh product, 0.20 to 0.25 gram being injected daily. Sympathicotonus being the rule in Graves's disease, the injections were associated with the administration of hyoscyamus, which has a depressing action on the sympathetic. As regards the therapeutic action of ovarian preparations on the thyroid Laemmer points out that ovarian insufficiency may give rise either to hyperthyroidism or hypothyroidism, according as the patient shows a tendency to sympathicotonus or vagotonus.

191. The Effect of Tobacco in Post-encephalitic Tremor.

G. HERRMANN and E. WOTKE (*Med. Klin.*, December 4th, 1925, p. 1842) have noticed a remarkable improvement in post-encephalitic tremor from the employment of tobacco derivatives. The first case of the kind seen by them was in a man, aged 27, whose tremors improved so much after smoking a cigarette that he was able to write a letter. The authors have now treated altogether fourteen cases, and with three exceptions have found that tobacco exercised a favourable action on the tremor, although the result was not so striking as in their first case. Of the three exceptions one was an example of true paralysis agitans and another a severe case of post-influenzal encephalitis. A nicotine salt in the form of nicotine tartrate had only a very slight action in no way comparable to that of smoking a cigarette. The authors add that the question of what constituent of tobacco is the active agent must first be decided before nicotine can be employed therapeutically. Nicotine is found in the leaves of *Cannabis indica* and piturin isolated from the leaves of the Australian solanaceous plant *Duboisia hopwoodii* is said to be identical with nicotine. Duboisin is well known to have an action similar to that of hyoscine in the treatment of true and pseudo-Parkinsonism.

Dermatology.

192. Thrush Infections of the Skin.

B. SHELMIRE (*Arch. Derm. and Syph.*, December, 1925, p. 789), who records five illustrative cases, states that during recent years a great many skin eruptions formerly regarded as "eczema" have been shown to be due to *Oïdium albicans*. They occur either as disseminated lesions over large areas of the skin surface as in water-bed treatment, after wet dressings, in nursing infants, or are found localized in the contact areas of the skin (anus, genitals, under the breasts, the axillary and interdigital folds), where the warmth and moisture are especially favourable for the growth of the fungus. In water-bed treatment the sites of predilection are those areas of the skin which are alternately exposed to water and air, such as the axillae, knees, and hands. The genital and anal regions are often much involved, and sometimes the greater part of the body may be affected, the areas being thickly studded with papules and vesicles. In nursing infants the favourite site for the lesions is the circumanal region, whence they extend to the thighs, genitals, abdomen, and buttocks, consisting of superficial punctate vesicles, which frequently become pustular, or lentil-sized areas of erythema, with branny scales in the central portions. Mycotic infections following wet dressings show no typical localization and are characterized by the presence of vesicles and pustules, often in herpetic arrangement. Thrush infection beneath the breasts is often seen in nursing mothers whose infants are suffering from stomatitis due to *Oïdium albicans*. There is only one case on record, reported by Engelhardt, of thrush infection of the axilla. Interdigital thrush infection is seen in one or more spaces of the hands and feet, the third interdigital space being the site of predilection in the hand. Women, and especially those engaged in house work, are particularly prone to this infection. Other localizations of thrush infection are the nails, in which hyperkeratotic changes, abscesses or chronic paronychia may occur. Thrush infections are very resistant to treatment, salves, wet dressings, and the quartz lamp being unavailing. In Riehl's clinic at Vienna the only satisfactory results have been obtained from radium treatment, by which complete healing of the lesions is usually effected.

193. Eczema and Focal Infections.

J. W. VISHER (*Amer. Journ. Med. Sci.*, November, 1925, p. 723) points out that most authorities regard sensitization to various foods as being the most important cause of infantile eczema, and that since most children slowly improve and eventually recover without dietary restrictions it would seem likely that immunity to food substances is gradually acquired. But, he states, in the adult one group of cases of eczema appears to be due to external irritants and in another group this condition seems to be a result of some focus of infection. He reports five cases in which when a focus of infection was removed the existing eczematoid condition rapidly cleared up. In three of these recovery followed the removal of diseased teeth, in one the eczema ran its course concurrently with an attack of acute pharyngitis, and in the other case the condition appeared soon after the onset of puerperal sepsis, and subsidence of the eruption accompanied improvement in the pelvic infection. In each patient careful search was made to discover some other possible cause of the skin lesions, but with no success. Local treatment had little success, and the eczema appeared to improve in spite of rather than because of it. Visher suggests that the eruption is due to the patient becoming sensitive to the end-products formed in the focus of infection.

194. Pityriasis Rubra.

IN view of the obstinate character of pityriasis rubra H. GOUGEROT (*Bull. de Derm. et de Syph.*, November 8th, 1925, p. 374) publishes the following case. A girl, aged 5, was seen in May, 1925, covered with an extensive eruption of pityriasis rubra pilaris, which had proved very resistant to treatment. In addition to the local application of salicylic ointment, dieting, small doses of calomel and arsenic, injections of Vaudremer's antituberculous vaccine were given, and by the end of June the child was completely cured and remained so. The author believes that the vaccine was the effective agent in producing so speedy and satisfactory a cure; he does not think that spontaneous regression occurred. He had previously used this vaccine with success in the treatment of cutaneous tuberculosis.

Obstetrics and Gynaecology.

195. Prognosis in Uterine Cancer.

BÖHM and ZWEIFEL (*Zentralbl. f. Gynäk.*, January 2nd, 1926, p. 30) describe various efforts which have been made to find which histological types of cancer of the uterus are most amenable to *x*-ray or radium treatment. Bergonié's law, according to which tumours possessing less highly differentiated cells show the greater radio-sensitivity, has not been confirmed by certain recent observers, who attach more importance to the relative amount of connective tissue present, to the quantity of effused blood, and to other factors. Adeno-carcinomatous tumours have been described as being refractory in the cervix, but in the corpus uteri as responding favourably to radiation, but Döderlein found that cases which were cured had always shown solid and never glandular carcinoma. The investigations of the present authors show that the prospect of cure is relatively favourable where the stroma of the tumour is richly infiltrated with leucocytes. Other favourable signs are relative "unripeness" of the tumour cells, a large amount of cytoplasm with abundant vacuolation, and rich leucocytic infiltration of the tumour epithelium; these conditions, however, rarely coexist. They find the medullary type of tumour more favourable and attach little importance to the frequency of mitoses. Formation of epithelial pearls is not discouraging if other histological criteria are favourable. Comparing the prognosis formed on histological grounds in 122 cases (before radiation) with the subsequent clinical course Böhm and Zweifel found that they corresponded in at least three-quarters of the cases.

196. Removal of Fibroids during Pregnancy.

R. SCHOCKAERT (*Bruxelles-Médical*, January 17th, 1926, p. 378) points out that during the early months of pregnancy fibroids, especially of the interstitial type, grow larger and also softer, owing to the hyperaemia of the pelvic organs generally. The consequent infiltration may go so far as to produce a cystic condition, and even a central cavity, in which case pressure on the fibroids causes flattening, and tension results in lengthening, so that the course of pregnancy is little disturbed. Rapid hypertrophy of a pedunculated fibroid often gives rise to pressure on the diaphragm and intestines, or, if the fibroids are impacted in the lower pelvis, to interference with the rectum and bladder. Schockaert removed one such fibroid from a primigravida by cutting the pedicle, and the pregnancy went to term; this fibroid was

as large as a man's head. He maintains, however, that unless symptoms are urgent no surgical intervention is desirable. Impacted fibroid is an indication for treatment, and pressure on the intestine caused by a hardish fibroid of the anterior uterine wall with much pain. In another patient with a fibroid which involved the whole thickness of the uterus, so that its removal left a two-inch hole in the wall, the author by rapid suture averted expulsion of the ovum and the pregnancy continued.

197. The Virulence of Vaginal Organisms.

E. PRIBAM (*Zentralbl. f. Gynäk.*, January 16th, 1926, p. 137) refers to the attempts of Ruge and of Philipp to determine the virulence of the micro-organisms, especially the streptococci, present in the vagina and cervix. An increase in the number of streptococci, after a mixture of the discharge and the blood of the patient has been allowed to stand for some hours, is taken to indicate a relatively high degree of virulence of the organism. At certain clinics so great importance has been attached to the Ruge-Philipp reaction that a positive result has been considered to prohibit operative treatment of cancer of the cervix and to render the risk of a Caesarean section unjustifiably great. Pribam's study of a hundred gynaecological and obstetrical cases leads him to conclude that many patients suffer no severe infective phenomena in spite of a high degree of virulence of the cervico-vaginal flora as shown in the Ruge-Philipp test. E. M. FUSS (ibid., p. 140) records 238 cases of radiological treatment of uterine carcinoma, comparing the course of events in those patients locally infected with virulent and non-virulent organisms respectively as shown by the Ruge-Philipp test. In the latter group treatment was followed by septic complications in 6 per cent., with 1.2 per cent. mortality; where virulent organisms were present severe infectious processes (such as protracted fever, peritonitis, and parametritis, occurred in 42 per cent., with a 10 per cent. mortality. In the Berlin Universitäts-Frauenklinik cases showing a positive Ruge-Philipp test are rarely submitted to operation; of the "negative" series of 65 cases surgically treated infection was absent or very slight in 91 per cent. Mortality and morbidity in a series of 180 cases were definitely less if febrile conditions following labour or abortion were associated with a negative Ruge-Philipp test. Fuss concludes that the presence of "virulent" organisms is a significant warning sign, and thinks that when severe infection follows operative or radiation treatment in spite of a negative Ruge-Philipp test the micro-organism responsible is probably an anaerobe which has eluded the test.

198. The Etiology of Eclampsia.

ZANGEMEISTER (*Med. Klin.*, January 2nd, 1926, p. 38) puts forward the theory that eclampsia is caused by cerebral pressure which is due to an oedematous swelling of the cerebral tissue, part of a general dropsy occurring slowly in the pregnant, and more rapidly in the parturient woman. He ascribes the albuminuria to a corresponding oedema of the kidney. The symptoms of eclampsia are ushered in by a rise in blood pressure; this should be treated by rest in bed, control of diet, and lumbar puncture; a later symptom is a rapid increase in weight. In the event of these symptoms not responding to treatment, the author considers it justifiable to empty the uterus. Employing this preliminary treatment he has had only one death from eclampsia during the last three years.

Pathology.

199. Infectivity of Tuberculous Filtrates.

T. VEBER (*C. R. Soc. de Biologie*, January 15th, 1926, p. 8) describes a case of artificial pneumothorax in which a pleural effusion appeared six weeks after the operation, large numbers of tubercle bacilli being found. Later the effusion became purulent, and the bacilli diminished in numbers till after five months they were no longer to be found. Nine months after the operation 5 c.cm. of the fluid was withdrawn, incubated at 37° C. for three days, mixed with 45 c.cm. of saline, and filtered through a Chamberland L2 candle. Two guinea-pigs were inoculated subcutaneously with 15 c.cm. of the filtrate. One of these animals died in four months, and at necropsy was found to have enlarged tracheo-bronchial glands; no tubercle bacilli were demonstrated. The other animal was killed a few days later, and also showed marked enlargement of these glands; tubercle bacilli presenting the usual acid-fast characteristics were found in the gland pulp. Veber concludes, therefore, that in a pleural fluid containing no visible tubercle bacilli there may exist certain forms which are capable of passing through a Chamberland filter, and which on inoculation into guinea-pigs can give rise to a type of disease differing from the usual experimental tuberculosis in the confinement of the lesions to the tracheo-bronchial group of glands. In the same journal (p. 46) F. ARLOING, A. DUFOURT, and MALARTRE describe the production of an atypical tuberculosis in guinea-pigs by the injection of filtered suspensions of tubercle bacilli. The material that they worked with consisted of extracts passed through a Chamberland L3 candle, from thirty human cases of tuberculosis of diverse nature. To all appearances these filtrates were sterile, but after injection fourteen of them gave rise to tuberculosis. As a rule the infected animals remained well for three or four months, then became cachectic and died. At the necropsy no macroscopic lesions were seen, but tubercle bacilli were found in smears from the glands. In two cases the animals developed the typical inoculation disease.

200. The Morphology of B. melitensis and B. abortus.

G. FAVILLI (*Lo Sperimentale*, January, 1926, p. 1041) has tried to distinguish morphologically between *B. melitensis* and *B. abortus*. Working with 20 strains of Bang's bacillus and 7 strains of *B. melitensis*, he found that both organisms were pleomorphic, presenting in one and the same preparation coccoid, cocco-bacillary, and definite bacillary forms. The use of Amato's brilliant cresyl-blue stain demonstrated the presence in each bacillus of a very tiny round granule, stained dark blue, and situated either at the equator or near one end. No difference was established between the granules of the two species of organism. By means of a stain for flagella he was able to make out a short prolongation of the protoplasm at one end of the bacillus. This was considerably thicker than a flagellum, and was no longer than the bacillus; sometimes it stretched backwards, sometimes it curled round to touch the side of the organism. Careful examination for motility under dark-ground illumination failed to show any true movement of the bacilli; the very active Brownian motion was not hindered by the presence of weak solutions of antiseptics. Further, using Rovida's sand tube, he failed to demonstrate any movement of the bacilli. It is doubtful, therefore, whether the protoplasmic prolongation can be regarded as a true flagellum. The main point of interest is that the two species of bacilli are alike in respect of their pleomorphism, their granule formation, their flagellum-like bodies, and their non-motility. Morphologically they must be considered indistinguishable.

201. Immunization against B. melitensis.

E. SANFILIPPO (*Biochimica e Terap. Sperimentale*, December, 1925, p. 493) has obtained some successful immunization results in white mice by the use of a vaccine consisting of organisms treated with gold chloride. Cultures of *B. melitensis* grown for forty-eight hours at 37° C. were suspended in a 1 per cent. solution of gold chloride; after one hour the suspensions were centrifuged, the supernatant fluid drawn off, the organisms washed repeatedly with distilled water, and finally suspended in the same medium. The gold chloride appeared to have a detoxicating action, for after treatment with this salt the organisms could be injected in large quantities (two agar slope cultures) intraperitoneally into white mice. Similar injections of organisms sterilized by heat killed the animals in two or three days. Mice injected with the bacilli treated by gold chloride were found able to resist without any injury ten lethal doses of a living virulent strain of *B. melitensis*. Mice injected with heat-killed organisms succumbed to a similar dose of living bacilli in twenty-four hours. The author believes that the use of this detoxicated vaccine confers a definite protection on mice.

202. The Action of Mixtures of Rabies and Herpes Virus.

P. REMLINGER and J. BAILLY (*C. R. Soc. de Biologie*, December 18th, 1925, p. 1486), in view of the resemblance between the viruses of rabies and herpes febrilis, determined to study the action on animals of a mixture of the two viruses. Two quarters of the brains of rabbits which had died, one of herpetic encephalitis and the other of paralytic rabies, were crushed together in a mortar and made into a fine emulsion with 40 c.cm. of normal saline. The emulsion was kept twenty-four hours in the ice-chest and then inoculated into the brains of rabbits, guinea-pigs, and cats with the following results: The rabbits died on the third or fourth day of an encephalitis indistinguishable from that due to inoculation of herpes virus. In three days' time the virus of rabies had not had time to develop. The cats usually died on the eighth to the tenth day after inoculation of a disease impossible to distinguish from paralytic rabies. In guinea-pigs the symptoms were not characteristic either of rabies or herpes, death occurring five to eight days after inoculation. The authors conclude that there is no antagonism between the virus of rabies and that of herpes, and that they are capable of developing in the inoculated animal in a parallel manner without affecting one another.

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

203. Rheumatic Fever and Chorea in Children.

H. C. BUSSIERE and L. J. RHEA (*Canadian Med. Assoc. Journ.*, January, 1926, p. 35) record the results of an analysis of 100 cases of acute rheumatic fever and chorea in children, undertaken to determine the clinical picture and the results of treatment in the two diseases. Before the sixth year both diseases are rare and occur most frequently between the sixth and the twelfth, females being more susceptible than males, especially as regards chorea. In both there was a high percentage of cardiac lesions, though such involvement was more frequent in acute rheumatic fever than in chorea. Acute or chronic disease of the tonsils was of frequent occurrence; only 3 per cent. of cases of chorea were without an associated tonsillitis, acute rheumatic fever, or cardiac involvement. The treatment adopted in acute rheumatic fever comprised rest in bed between woollen blankets, with a mixture of 1 grain of sodium salicylate a day for every pound of body weight, sufficient sodium bicarbonate to reduce the acidity, and 10 to 30 minims of tincture of nux vomica. In cases showing cardiac weakness tincture of digitalis was given commencing with five minims three times a day and gradually increasing. A similar line of treatment was followed in chorea with isolation and as complete quiet as possible for at least a month, even in mild cases, and as soon as the acute stage had subsided removal of the tonsils if diseased. The authors add that while the prognosis in both diseases is generally good as regards life, the prospect of a return to complete health is poor if there has been any involvement of the heart; if attacks of chorea are repeated, or are of long duration, the children may become nervous and their intellectual ability be impaired.

204. Irregularity of the Pulse in Epidemic Encephalitis.

Y. HANNEMAN (*Nederl. Tijdschr. v. Geneesk.*, January 2nd, 1926, p. 12), who records four illustrative cases, draws attention to the occurrence of irregularity of the pulse in epidemic encephalitis, and states that this symptom is sometimes present in the early days of the disease. Some patients may complain of palpitation. L. BOUMAN (ibid., January 16th, 1926, p. 293), on the other hand, remarks that he has never observed this symptom in epidemic encephalitis, and that it has not been described in the literature as in any way characteristic of the disease. Slowing or quickening of the pulse has been recorded, usually corresponding to the temperature. In the examination of 100 cases Nellis found only one patient who showed any change in the pulse—namely, slowing. Achard alone states that extra-systoles may occur. He thinks it, therefore, very remarkable that Hanneman had found irregularity of the pulse so frequent in epidemic encephalitis, and adds that further observations on this point are reqnired.

205. Infectious Mononucleosis or Glandular Fever.

J. G. HISLOP (*Med. Journ. of Australia*, November 7th, 1925, p. 557), who records four cases, three of which occurred in children aged 1 year and 8 months, 5 years, and 10 years, and one in a nurse, states that Filatow of Moscow first described the disease in 1886 as glandular inflammation of the neck without inflammatory changes in the mouth, nose, or pharynx. Pfeiffer in 1889 gave the first clear account of the disease. Dawson Williams in 1897 also gave a full description of it, but it was left for the later writers to describe the accompanying blood changes. The leucocytes may range as high as 26,000 per cubic millimetre, but one observer says that there may be a leucopenia. According to Longcope, 80 to 90 per cent. of the leucocytes are of the non-granular type, and may appear as (1) small mononuclear leucocytes identical with the small lymphocytes seen in normal blood; (2) large mononuclear cells identical with the large mononuclear and transitional cells of normal blood; (3) mononuclear cells of a type not usually seen in normal blood. All observers agree regarding the acute onset with malaise, anorexia, obstinate constipation, pain and stiffness in the neck, abdominal pain, and high fever. The glandular enlargement occurs early, the usual site of the first enlargement being just beneath and posterior to the left sterno-mastoid. The glands then become enlarged on both sides of the neck anteriorly and posteriorly; the axillary and inguinal glands may also be enlarged. The acute symptoms subside about the fifth day and the glands then begin to resolve. The liver is almost invariably enlarged, and the spleen in about half the cases. The mediastinal and bronchial glands may be affected, and their enlargement accounts for the cough which accompanies the infection and may persist for some time. The disease is rarely fatal, but may be severe. Hislop's cases were of a mild type. The glands may take from a fortnight (Dawson Williams) to a month (Kellert) to subside. Acute nephritis, which occurs in about 6 per cent., is the commonest complication. The disease must be distinguished from tuberculosis, syphilis, and Hodgkin's direase, which have not a sudden onset and are more chronic. Acute leukaemia is excluded by the low leucocytosis or leucopenia.

206. Prophylaxis in Tuberculosis.

B. WEILL-HALLÉ and R. TURPIN (*Bull. et Mém. Soc. Méd. des Hôp. de Paris*, December 24th, 1925, p. 1589) describe an attempt to obtain active immunity from tuberculosis in the case of infants. They used the special vaccine of Calmette known as "B.C.G.," which is a living culture. It was given by mouth on the fourth, sixth, and eighth days after birth. Bacilli were passed in the excreta for a few days, but no ill effects were observed. The authors have treated a series of 254 patients, some with a healthy and others with a tuberculous parentage. The mortality in the whole series was 13; 5 children died within the first month of gastro-enteritis, but in the institution where the tests were made 5 deaths occurred from the same cause among non-vaccinated infants. There were 8 deaths between the ages of 1 month and 1 year, but in no case was the death traceable to the vaccination. Certain infants born of healthy parents, and who became exposed to infection for the first time at the age of a few months, lost no weight and showed no clinical evidence of the disease, but the von Pirquet reaction became positive and pulmonary nodules were seen on *x*-ray examination. The question now confronting the authors is that of revaccination, since the immunity lasts only about two years. The original method is no longer suitable, since the child's intestine differs from that of the infant at or shortly after birth. The difficulty lies in the fact that to establish the success of a subcutaneous injection the child's von Pirquet reaction must have been negative for at least one month beforehand.

Surgery.

207. Sequels of Prostatectomy.

R. H. HERBST (*Journ. Amer. Med. Assoc.*, January 9th, 1926, p. 93) discusses the causes of interference with urinary function after removal of the prostate, and emphasizes the importance of the pre-operative examination from this point of view. Diverticula of the bladder, which are frequently associated with prostatic obstruction, may be congenital or acquired, and if overlooked retard convalescence by maintaining cystitis with frequent and painful urination. The author recommends strongly that in every case of prostatic obstruction the bladder should be distended before the operation with a 15 per cent. solution of sodium iodide and a radiogram taken; the bladder should then be emptied, air injected, and a second radiogram taken. In this way diverticula which do not retain urine can be recognized and need not be removed, though the retention type must be excised when the prostate is dealt with or soon after. Examination of the central nervous system is also recommended in order that any nerve or circulatory lesions may be detected. Fibrosis of the internal sphincter may interfere with the urinary function after prostatectomy, and prostatic tags left behind and attached to the internal urethral orifice may be large enough to obstruct the flow of urine. Another cause of obstruction is the barrier produced by the trigone crossing the internal urethral orifice at a high level. This can be detected after enucleation of the prostate and may be corrected by a V-shaped excision of the bladder wall at this point. Urethral polyps developing in the prostatic bed may be the cause of impaired function; they can easily be removed by diathermy. Careful bimanual palpation of the prostatic bed and the trigone will reveal the presence of any deep-seated, enlarged submucous glands. Retention and infection of the upper urinary tract is not uncommonly overlooked and is usually corrected quickly by pelvic lavage and instillation of silver nitrate. Other possible causes of impaired function after prostatectomy include infection of the seminal vesicles; formation of a stone in the bladder; the incomplete removal of a prostatic adenoma; and malignancy in the lower segment

of the prostate, with benign hypertrophy in the upper one. Adhesion of the posterior surface of the gland to the lower segment should arouse suspicion of the existence of this last condition, and bimanual palpation of the prostatic bed after enucleation will usually reveal some hard nodules in the so-called surgical capsule of the gland.

208. Treatment of Surgical Tuberculosis.

DURING the past two years G. B. RHODES (*Journ. of Lab. and Clin. Med.*, December, 1925, p. 227) has performed a number of experiments to discover a substance that could be injected into a tuberculous abscess cavity and exert an antiseptic action on the causative bacilli. The best results have been obtained with cod-liver oil. As this substance is too acid to be tolerated by the healthy tissues, it must first be boiled with an equal quantity of an aqueous suspension of magnesium hydroxide; the mixture is then centrifuged, and the supernatant fluid, which contains the oil, is removed. In this form it may be introduced into an abscess cavity without causing irritation. The success that has followed the evacuation of tuberculous abscesses and replacement of the pus with this oil has led the author to inquire into the manner in which it acts. Campbell and Kiefer found that cod-liver oil exerts a bactericidal effect on virulent strains of tubercle bacilli; Kugelmass and McQuarrie showed that the oil possesses the property of emitting ultra-violet rays. An attempt to confirm the latter statement has cast doubt on the ultra-violet nature of the rays. An *x*-ray film enclosed in black paper and placed over a metal dish containing cod-liver oil, when developed after forty-eight hours, was found to have a perfect representation of the oil upon it; rays must have emanated from the oil to affect the sensitized film. It seems probable that these rays are not of one type, but are composed of different wavelengths.

209. Intracranial Abscess.

SIR W. MILLIGAN (*Journ. of Laryngol. and Otol.*, January, 1926, p. 1) remarks that the bony walls of the middle ear and mastoid act as a barrier against acute infective processes, but that chronic inflammation in time makes a breach in this barrier and some extradural complication arises. If the infective process is virulent and comparatively acute, meningitis is one of the commonest complications, but in more chronic cases adhesions form and some kind of abscess results. Intracranial abscesses occur as an almost invariable rule only after many years of suppuration and may be classed as cerebral and cerebellar. It is usually accepted that cerebral are commoner than cerebellar abscesses, but the author's experience is that the proportion is one cerebral abscess to two cerebellar. Many cases of infection arise from the labyrinth, the usual path being along the internal auditory meatus, or the aqueductus vestibuli. An extradural abscess or sinus thrombosis and suppuration may convey the infection through the meninges. The author stresses the importance of cholesteatoma which opens up the spaces of the internal ear and allows the infection with which it is almost invariably associated to enter. Cerebellar abscesses are never large because of the proximity of the cardiac and respiratory centres. They usually run a latent course and then cause sudden death. Intracranial pressure is the rule, with the classical triad of headache, vomiting, and papilloedema. There may be homolateral hemiparesis and ataxia. Nystagmus in early stages is directed towards the affected side, but later towards the sound side. Dysdiadokokinesis is a common symptom. The abscess should be drained at once on account of the danger of sudden death.

210. Surgical Treatment of Angina Pectoris.

S. A. LEVINE and F. C. NEWTON (*Amer. Heart Journ.*, October, 1925, p. 41) give detailed reports of seven patients upon whom cervical sympathectomy was performed for the treatment of angina pectoris. These patients were all alive three months to two years after operation. Of the seven, three were completely and immediately cured, three were considerably improved, and one was neither better nor worse; three of these last four later responded to medical treatment. An eighth patient died a few hours after the operation, which was only performed as a last resource in a moribund case at the patient's request; necropsy showed an occlusion of the left coronary artery. The authors emphasize the importance of proper selection of patients in diminishing the immediate mortality and increasing the number of successes. In estimating the patient's suitability they lay stress on accuracy of diagnosis, with special reference to cardiac infarction; the myocardium must be sound, and preferably there should be no valvular disease. Coronary thrombosis, they add, may be distinguished from an ordinary anginal attack by its longer duration, greater severity, and resistance to medical treatment. In thrombosis also the pulse tends to become rapid and to change in rhythm, whereas in angina it remains essentially unchanged. Moreover, the blood pressure rises during an anginal attack and falls with thrombosis, in which latter fever and leucocytosis are common. In order to assist the establishment of indications for this operation the authors suggest that all reports of cases should be in full detail. They believe that with a proper selection of patients, so as to exclude cases of cardiac infarction and congestive heart failure, this method of treatment is of distinct value.

Therapeutics.

211. Treatment of Pulmonary Tuberculosis with Metal Salts.

N. LUNDE (*Ugeskrift for Laeger*, January 7th, 1926, p. 1) has tested at the Lyster Sanatorium in Norway Walbum's statements as to the therapeutic action of small doses of certain metals in a variety of infectious diseases, including tuberculosis. The best results were achieved with manganese chloride, intravenous injections being given at intervals of four to seven days. Injections of small doses of salts of calcium, gold, and beryllium were also given, from ten to twenty-six injections being given in each case. Of the 58 tuberculous patients whose treatment was completed, 31 were in the third stage of the disease, and 25 of them benefited from the treatment. Of the remaining 27 patients who were in the first or second stage of the disease, 24 derived benefit from the treatment, which in no case seemed to be injurious. In 22 cases the rate of sedimentation of the erythrocytes was investigated, and in as many as 16 of these cases there was an improvement, the rate of sedimentation being reduced by an average of 13.1 mm. in an hour. Among the same 22 patients there were 5 who gave a positive urochromogen reaction at the beginning of the treatment, and in 2 of these cases this reaction became negative under the treatment. As many as 51 of the 58 patients had tubercle bacilli in the sputum at the beginning of the treatment, and in 8 cases the bacilli disappeared. Comparing Walbum's system of small, carefully graduated doses with Moellgaard's system of massive dosage, Lunde argues that the former is a process which stimulates the reactive properties of the tissues, and thus promotes an active defence of the body by its own mechanism, whereas the processes concerned when the dosage is massive are largely passive, the high concentration of the salt in question being sufficient in itself to interfere with the action of microbes in the body. Lunde believes that Walbum's system could be developed into a very effective weapon against tuberculosis.

212. Acriflavine in Epidemic Encephalitis.

C. E. RIGGS (*Minnesota Med.*, December, 1925, p. 753) records three cases of epidemic encephalitis in patients aged 24, 40, and 33, treated by intravenous injections of neutral acriflavine. Each patient received eight consecutive injections. The dosage was 10 c.cm. of a 0.5 per cent. solution. In order to avoid distressing symptoms the injection was given slowly at the rate of 10 c.cm. in five minutes. If the injection was given more rapidly there would be gasping respiration with air hunger, associated with a sensation of heat, affecting the mucous membrane of the respiratory tract, and intense lacrymation. After two or three injections the patients experienced great relief, and after eight injections the improvement was really remarkable. The Kernig, Babinski, and other objective signs disappeared slowly.

213. Prostatic Massage in Gonorrhoeal Urethritis.

A. L. WOLBARST (*Med. Journ. and Record*, January 6th, 1926, p. 3) calls attention to the value of prostatic massage in acute gonococcal infections of the anterior urethra. In forty cases so treated there was no extension of the inflammation to the posterior urethra, and very often the pre-existing congestion was relieved. In about 30 per cent. of cases of first infections of acute anterior gonococcal urethritis in which there was no clinical evidence of posterior involvement the prostate was found to be enlarged, soft, and congested; there was unmistakable evidence of a chronic low grade, non-venereal prostatic inflammation with similar evidence in some cases of chronic inflammation in the seminal vesicles. The existence of such a low-grade inflammation accounts for those cases in which a mild anterior urethritis suddenly develops an acute or subacute prostatitis tending to chronicity and complications. Wolbarst recommends the routine examination of the prostate and seminal vesicles in every case of anterior urethral infection, and in the event of prostatic congestion being present, as evidenced by a large, soft, and boggy prostate, he advocates gentle massage carefully performed as a protective measure against the extension of the inflammation and for the reduction of the pre-existing chronic congestion. Such massage should be given every four or five days as long as signs of chronic inflammation exist.

214. Refined Therapeutic Serums.

J. M. DUBREUILH (*Thèse de Paris*, 1925, No. 515) states that a refined serum can be obtained by the following method. To a fixed quantity of dried serum are added increasing quantities of distilled water. The dried serum is dissolved in water in the proportion of 1 to 10, the solution being all the more viscid the less water is present. The different solutions of serum are then put in the coagulator for half an hour at 60° C. Part of the albumin is precipitated and becomes insoluble. The maximum quantity (0.53 gram) of protein substances or residual serum is thus obtained with a syrupy fluid consisting of two parts of water and one of serum. The most favourable dilution is consequently 1 gram of serum for 2 grams of water. By this method a refined serum is obtained freed from more than 50 per cent. of its albumins. Refined serum is five times less toxic experimentally than the original serum, and the more the process of refinement is repeated the less toxic does the serum become. The preventive and curative value of refined serum is about the same as that of the original serum. This fact has been proved experimentally in the case of anticholera, antitetanic, and antidiphtheritic serums, and clinically as regards its prophylactic action in the case of antidiphtheritic serum.

215. Stovarsol in Vincent's Angina and Ulcerating Stomatitis.

J. A. VOSS (*Tidsskrift f. d. Norske Laegeforening*, December 15th, 1925, p. 1227) has tested at the municipal fever hospital in Oslo the efficacy of stovarsol in Vincent's angina and ulcerating stomatitis. There were 10 patients suffering from the former disease and 2 from the latter. No other treatment, general or local, was employed. The drug was administered by the mouth, the first two tablets, each of 0.25 gram, being given on an empty stomach in the morning with a glass of water. In the absence of diarrhoea four tablets were given on the second day, and this dose was repeated till the membranes had almost completely disappeared. In 9 of the 10 cases of Vincent's angina recovery was complete when twelve to twenty-eight tablets had been given. Only in one case was it necessary, after twenty-eight tablets had been given, to resort to an injection of neosalvarsan. As stovarsol is excreted slowly, it is not necessary to continue giving it till the ulceration has cleared up completely. The author recommends this treatment in general practice, on the grounds that it renders local applications superfluous and saves the patient the cost and loss of time entailed by admission to hospital. The patient can, he adds, continue at work while taking the stovarsol. For patients already in hospital the author prefers the older method of local applications of salvarsan in glycerin, since this is cheaper and as effective.

Radiology.

216. Radiography of the Gall Bladder.

W. BAETZNER (*Med. Klin.*, January 2nd, 1926, p. 18) describes his method of examining the gall bladder radiologically. After purgation the patient is given 5 grams of tetra-iodo-phenolphthalein sodium or 3 grams of tetra-bromo-phenolphthalein sodium dissolved in 40 c.cm. of distilled water and boiled for twenty minutes; the intravenous injection of this solution should be spread over ten to fifteen minutes. The preparation may be given by the mouth, 0.1 gram for each kilogram of body weight, but the result is said to be less satisfactory as some of the dye passes through the intestine. After fourteen to eighteen hours the patient is *x*-rayed and a shadow of the gall bladder will be seen. A faint shadow suggests partial obstruction of the ducts, while a mottled appearance indicates the presence of stones. A completely negative picture—that is, the absence of any shadow—points in most cases to a stone in the duct or a severe degree of inflammation. There is a possibility of error, however, and Baetzner mentions four cases in which, on the strength of a negative picture, the patients were operated on and were found to possess healthy gall bladders. Two proved to be cases of acute pancreatitis, one of acute appendicitis, and one of spastic colitis.

217. X-ray Treatment of Malignant Granuloma.

N. VOORHOEVE (*Nederl. Tijdschr. v. Geneesk.*, October 10th, 1925, p. 1677) records the results of *x*-ray treatment of 19 cases of malignant granuloma; 11 were in women and 8 in men. The ages ranged from 8 to 49, the average age being 29. Apart from purely symptomatic treatment no therapeutic measures were employed. The results were as follows. The average duration of life and good health was considerably prolonged. Voorhoeve points out that it is essential that all the localizations of the process should receive a sufficiently large dose, and that any recurrence should be treated at once. He frequently observed that a few hours after the first application of *x* rays, especially when there was a sudden and considerable absorption of the granulomatous tissue, there was a rise of the already elevated temperature, which subsided in one or two days, when an improvement of the general condition and a fall of temperature occurred. Leucopenia in patients under treatment might reach a considerable degree without any permanently bad effect resulting. The lowest number of leucocytes found was usually between 3,000 and 5,000. The prognosis was unfavourable in cases where the malignant granuloma was situated in the lung and abdominal lymphatic glands, in cases of pleural effusion, and in those complicated by diffuse tuberculosis of the lymphatic glands. *X*-ray treatment is contraindicated in the following conditions: association with pulmonary tuberculosis when the malignant granuloma is situated in the mediastinum or lung, amyloid disease, multiple metastases in the bone marrow, and acute infective processes in the neighbourhood of the malignant granuloma.

218. Radiography of the Lungs.

L. H. CLERF (*Surg., Gynecol. and Obstet.*, December, 1925, p. 722) has used bismuth subcarbonate and lipiodol as radiopaque substances for radiological examination of the lungs in a large series of cases. He has found that the bronchoscopic insufflation of bismuth subcarbonate into the tracheobronchial tree is devoid of untoward effects, but although the introduction of lipiodol was harmless in all his cases there has been one reported instance of acute iodism with oedema of the larynx following it; Clerf advises, therefore, that lipiodol should not be used in persons susceptible to iodine. His investigations have shown that in an adult 1 ounce of bismuth subcarbonate can be safely used, as the greater part is rapidly expectorated within forty-eight hours. The quantity of lipiodol required in an adult is usually about 20 to 25 c.cm. and several days elapse before it all disappears. Clerf considers such radiological examination of great assistance in the diagnosis and localization of foreign bodies, neoplasms, and suppuration in the lungs.

219. Radiographic Diagnosis of Cervical Spinal Caries.

É. SORREL and G. MAURIC (*Journ. de Radiol. et d'Électrol.*, November, 1925, p. 497) state that the pharynx, larynx, and trachea form, in profile, in a skiagram a clear column, easily visible in front of the vertebral column; this is displaced forwards when an abscess due to cervical caries is present, and constitutes a simple means of diagnosis which is a valuable sign in some cases when there are no clinical signs of abscess. Occasionally, subsequent skiagrams show regression of the abscess. The relations of the "clear column" with the cervical spine indicate also the best route for its evacuation. In one case of compression of the oesophagus and trachea of uncertain origin, the skiagram showed displacement of the soft tissues, and indicated indirectly the presence of an abscess.

Obstetrics and Gynaecology.

220. The Low Cervical Operation in Caesarean Section.

L. C. CONN (*Canadian Med. Assoc. Journ.*, January, 1926, p. 32) reports two cases in which the low cervical operation for Caesarean section was employed without difficulty and with satisfactory results. In discussing the relative values of this operation and the classical method he points out that after the latter there is considerable danger of rupture and that there is doubt whether regeneration of muscular tissue occurs. In favour of the low cervical operation are the facts that the cervix resists infection better than the fundus; healing is also more rapid owing to the absence of the repeated contractions which affect the upper uterine segment, and the active involution and fatty degeneration of the uterine wall after delivery. There is also less danger of leakage into the peritoneal cavity during the operation or after it, and the risk of adhesions being formed is reduced to a minimum. Conn adds that an uninterrupted convalescence after operation is characteristic when the low method is used, and intestinal complications are rare. The method cannot, however, be recommended for the obviously infected case. The mortality of the classical operation increases with every hour after the commencement of the pains, and especially after rupture of the membranes, whereas the low cervical operation has been stated to be easier when the patient has been in labour for some time. Where speed is a vital factor the classical operation retains its supremacy, because the low cervical operation takes fifteen to twenty minutes longer. Conn also reports a case in which uterine rupture followed two previous Caesarean sections of the classical type. Although there was only slight pain, the abdomen was opened and it was found that the whole of the uterine scar had ruptured

and a dead child was floating free in the abdomen. There was evidence that the scar had been gradually giving way and only required a few labour pains for the process to be completed. Conn, therefore, emphasizes the importance of avoiding such dangers by performing the low cervical operation whenever possible in preference to the classical method.

221. Lymphangioma of the Fallopian Tubes.

L. W. STRONG (*Amer. Journ. Obstet. and Gynecol.*, December, 1925, p. 853) reports two cases of lymphangioma of the Fallopian tube—a rare condition, of which only five previous cases appear to have been recorded. These two tumours gave rise to no clinical symptoms, and were only discovered during the course of operations for inflammatory conditions of the uterus; one was 5 mm. and the other 1/2 cm. in diameter. Subsequent microscopical examination showed the tumours to be typical lymphangiomata. Their small size and the absence of any clinical manifestations causes Strong to suggest that these tumours are not so rare as was previously thought. These two cases differ from the others reported in that they were unassociated with myomata, thus controverting the original belief in this relation. The Fallopian tubes were otherwise normal in all respects and there was no evidence of any malignant process. Both Strong's patients were married: one was aged 48 and had a large fibrous tumour of the ovary; the other, aged 52, had a retroverted uterus and cystic changes in both ovaries.

222. Absorption from the Vagina.

R. ROSENTHAL (*Zentralbl. f. Gynäk.*, January 9th, 1926, p. 122) describes the case of a woman who committed suicide by introducing three mercury sublimate tablets into the vagina. The whole of that organ sloughed, thus facilitating absorption of the poison from the wound. Rosenthal states that deposits of mercury albuminate may also be formed in the periproctal tissue, for which reason a good immediate treatment is to inject milk into the tissue lying between vagina and rectum, as a neutralizer. Remoter lesions are severe parenchymatous nephritis and fatty degeneration of the heart. He adds that it is advisable to supervise the preparation of vaginal douches until the patient becomes thoroughly familiar with the correct procedure, since there is a real danger of the solution being too concentrated.

Pathology.

223. The Bacteriological Diagnosis of Botulism.

V. DE LAVERGNE and E. ABEL (*Rev. d'Hygiène*, November, 1925, p. 950) summarize the methods available for the bacteriological diagnosis of botulism. A suspension of the suspected food should be heated to 70° C. for half an hour to destroy all vegetative bacteria, and inoculated in decreasing quantities into ten or twelve Veillon tubes of agar, which are incubated at temperatures varying from 25° to 55° C. After eight days suspicious colonies are picked off, planted in broth, gelatin, and glucose broth and incubated anaerobically. If a growth is obtained of organisms morphologically similar to the *Clostridium botulinum*, cultures should be put up in peptonized bullock's heart broth and tested for the presence of the specific exotoxin. This toxin varies according to whether it is secreted by Type A or Type B of the bacillus. With either type ingestion of the toxin will produce mydriasis, and pharyngeal and laryngeal pareses in the cat. If Type A is present, ingestion of the toxin produces muscular paralysis of the neck in fowls, followed by generalized paralysis, coma, and death in twenty-four to forty-eight hours. Type B does not affect fowls. If the result is negative, the filtered toxin should be injected subcutaneously into a guinea-pig. The result with either toxin is to produce abdominal paralysis, paralysis of the hind legs, dribbling, and death in two or three days. A similar result occurs with injected mice. Having proved the presence of a toxin, the next step is to ascertain if it is the toxin of the *Cl. botulinum*, and, if so, to which type it belongs. This is effected by injecting three guinea-pigs or mice—one with antitoxin A, one with antitoxin B, and one with normal serum; at the same time an equal dose of toxin is given to each animal. Provided that the control mouse and one of the antitoxin-injected mice dies, it may be concluded that the toxin injected was the toxin of the *Cl. botulinum*, and that it was of the type corresponding to that of the protecting antitoxin. Similar animal experiments are conducted on a suspension of the original food. From the human patient an attempt should be made to recover the organism from the faeces or vomit, and from the intestine after death. Occasionally it is possible to demonstrate the toxin in the circulating blood by animal injection.

224. Relation between Herpes Zoster and Varicella.

A. NETTER and A. URBAIN (*C. R. Soc. de Biologie*, January 22nd, 1926, p. 98) have examined the blood serum of 100 patients suffering from zona and 24 from varicella. They used the complement fixation test, preparing their antigens from the crusts of the skin lesions. In some tests the antigen was derived from herpes, in others from varicella; in other tests both antigens were used. The reaction was positive in 93 per cent. of the serums from zonal patients and in 91.7 per cent. from patients with varicella. Where both antigens were used the results were qualitatively identical and quantitatively similar. The authors conclude that the antibodies in both diseases behave in exactly the same way. They add that during the first few days of the attack they are in very low titre; their maximum is reached at the end of the second week, and after the attack they may persist for several months. Clinical evidence of the connexion between the two diseases was obtained in sixteen cases of zona. Netter and Urbain consider the zonal virus to be a mutation form of the chicken-pox virus, standing in much the same relation to this as the virus of vaccinia stands to that of variola. The zonal virus has a strong affinity for the nervous system, the chicken-pox virus a low one. The human body destroys the chicken-pox virus rapidly; the zonal virus is much more resistant and may remain latent for a long time, presenting in this respect a close analogy with the herpetic virus. Under the influence of various causes, of which arsenical intoxication is the best established, the zonal virus may resume its activity, and give rise to the typical eruption.

225. Structure of the Nasal Polypus.

G. BUSACCA (*Arch. Ital. di Otol., Rinol. e Laringol.*, November, 1925, p. 696) has investigated the structure of the ordinary polypus of the nose, and has drawn the following conclusions. The liquid in the glandular acini, in the cysts, and in some of the cells of the epithelium is normal mucin. The liquid in the mesh of the stroma is not mucin; van Gieson's stain indicates the presence of amyloid material, but no other stains confirm this, and the author considers that the substance must be hyaline. Fibrin is found in amorphous masses or in a definite reticulum of fibres. Elastic fibres are not found in a well formed state, but small fragments of fibrin are scattered through the sections, due, the author suggests, to the breaking up of the elastic fibres by oedema. Plasma cells are fairly numerous and are particularly grouped round the vessels. The epithelium shows in many cases a mucoid degeneration, in others a change to a pavement epithelium. The stroma consists of a fine connective tissue network containing fluid, leucocytes, and some stellate and fusiform cells. The glands have irregular acini which are often dilated and may form large cysts. The vessels, and especially the arteries, present a hyaloid degeneration and a notable thickening of the outer coat. The author concludes that the nasal polypus is not a myxoma, an oedematous fibroma, or a simple hydrops of the nasal mucosa, but an inflammatory condition resembling granulation tissue.

226. The Influence of Fatigue on Infection.

A. E. BOYCOTT and C. PRICE-JONES (*Journ. Path. and Bact.*, January, 1926, p. 87) have investigated the generally accepted belief that fatigue predisposes to infection. Rats were exercised in drums which were rotated quickly so as to cause them considerable difficulty in maintaining their equilibrium. There was a fall in the rectal temperature roughly corresponding to the degree of fatigue. Both the fall in the temperature and the onset of fatigue were slower in rats exercised at a temperature of 25° to 30° C. than at one of 4° C. In the first series of experiments ten batches of rats after exercise were injected intraperitoneally with Gaertner's bacillus; another eleven batches were first injected and then fatigued, the exercise being repeated on the next and sometimes on the following days. A similar number of control animals in each case were injected but not fatigued. The mortality among the exercised and the control animals was closely similar, indicating that fatigue did not lower the resistance to infection. In another series of experiments the rats were fed on Gaertner's bacillus, fatigued daily for several days, and killed after about a fortnight. The results were unexpected. Of 27 exercised rats 24 became ill and 13 died; of 28 non-exercised rats fed with the bacillus only one showed slight symptoms of illness and not one died. Fatigue after infection increased both the morbidity and the mortality, but this result did not seem to be due to the ease with which the bacilli penetrated the alimentary mucosa, since in both the exercised and the control animals the bacillus was recovered from the spleens of about 90 per cent. of the survivors. Similar experiments were made with the tubercle bacillus, but no evidence was obtained that the resistance of the animals was diminished by fatigue.

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

227. Hypogenital Ascites.

P. STANGANELLI (*Rif. Med.*, January 11th, 1926, p. 25), while recognizing tuberculous peritonitis in the young, simple idiopathic peritonitis at all ages, and abdominal scrofulosis with conspicuous lymphoid masses, describes a fourth form with the following characteristics. It occurs at or about puberty and is frequently associated with genital defects, such as amenorrhoea and monorchidism. There is no family history or predisposition to tuberculosis; the general condition of the patient is good, and there is complete absence of the tuberculous type of constitution. The patients belong to the lymphatic type and have short limbs, large abdomen, short neck, small pupils, open mouth, and an expressionless face. They are dull and apathetic, and the urine is scanty with a low urea content. The ascitic effusion forms rapidly; it is very obvious, very thin, and unassociated with any friction rub or adhesions. There is no pain and no fever, no night sweats, and no tuberculous foci in other organs. The fluid has the characteristics of a transudate, being serous with a specific gravity of 1008 to 1015; it rarely coagulates and contains 18 to 20 per cent. of albumin. It is not toxic for guinea-pigs, and tubercle bacilli are not present. There is no concomitant pleurisy. The author suggests that this type of essential ascites is due to an endocrine deficiency, especially of the thyroid and thymus and the lymphatic system. Working on this hypothesis good results were found to follow treatment with polyglandular substances and opotherapy, including a mixture of extracts of both ovaries and testes.

228. Anomalous Forms of Recklinghausen's Disease.

F. WISE and J. J. ELLER (*Journ. Amer. Med. Assoc.*, January 9th, 1926, p. 86) report three anomalous cases of Recklinghausen's disease, and summarize the literature, referring particularly to the reports of Parkes Weber, Trimble, and Levin. Regarding the propriety of including these anomalous types under Recklinghausen's disease, they state that they are found usually in the children of a family in which one or other parent has the classical signs of disease. Their cases were two brothers, aged 11 and 9, the older having many scattered light brown freckles on the neck, trunk, and extremities, together with a number of large *café au lait* spots. The pigmentation had been present since birth, and there were no blue spots. On the upper aspect of the left scapula there was a soft elevated tumour about an inch in diameter, which appeared at the age of 8. The younger brother had many small pigmented light brown lesions on the neck, trunk, and extremities, together with a few large *café au lait* spots of irregular shape and size. In both cases subjective symptoms were absent, and the testes were undescended. The father had an eruption, including numerous tumours, distributed irregularly over the trunk and extremities and varying in consistence. Almost the entire skin was covered by pigmented macules, chiefly dark or light brown; there were no blue spots. The eruption in his case appeared first at about the age of 5. There were no subjective symptoms and no history of Recklinghausen's disease in any of his ancestors. In none of the patients was there any deficiency of mentality.

229. Exanthema Subitum.

S. SALOMON (*Deut. med. Woch.*, December 25th, 1925, p. 2152) refers to the cases of this condition recently reported by von Bokay (*Epitome*, December 19th, 1925, para. 558), and records four cases from his own practice in female infants, aged from 5½ to 9 months, one of whom was his own daughter. The course of the disease was the same in all. The children, who had hitherto been perfectly well, suddenly became peevish, refused their food, and became restless in their sleep. The temperature ranged between 100.4° and 103.2° F. Nothing was to be found on physical examination beyond considerable injection of the posterior pharyngeal wall and slight conjunctivitis. After seventy-two hours in three cases and forty-eight hours in the fourth a morbilliform eruption appeared on the scalp, face, trunk, and extremities, the temperature falling to normal immediately after its appearance. The rash faded in another forty-eight to seventy-two hours, and complete recovery took place. As regards the diagnosis, Salomon states that a toxic rash, measles and rubella, can easily be excluded, but anaphylactic phenomena are more difficult to distinguish. Exanthema subitum has only a very slight degree of contagiousness, and apart from amnesia, which may last several months, leaves no sequelae. Salomon considers the term "exanthema subitum" less suitable than Zahorsky's term "roseola infantilis" or Glanzmann's term "exanthema iriticum." D. BARSI (*Wien. med. Woch.*, October 31st, 1925, p. 2435), director of the children's department at the Hadassa Hospital in Haifa, records three sporadic cases of exanthema subitum in infants aged 2½ months, 8½ months, and 11 months. No similar cases have been described before as occurring in the East, and particularly in Palestine.

230. Arthropathy as an Initial Symptom of Tabes.

R. ZANOLI (*La Chir. degli Organi di Movimento*, October, 1925, p. 613), who records two illustrative cases, states that the incidence of bone and joint complications in tabes is estimated at 4 to 5 per cent. by Marie and twice as high by Lotheissen. In both Zanoli's cases arthropathy was a very early symptom of the disease, as neither showed ataxia or disturbance of the tendon reflexes. The first patient was a man, aged 52, who had contracted syphilis at 18 and had remained in good health until 51, when, after a slight injury to the left knee, he developed a painless swelling of the joint. The suspicion of tabetic arthropathy was confirmed by changes in the pupils and superficial sensibility as well as by *x*-ray examination, which showed the typical appearances of a tabetic joint. Zanoli's second patient was a man, aged 33, who had contracted syphilis at 22, and ten years later, without obvious cause, developed slight pain in the right hip, shortening of the limb, and a limp. The diagnosis of tabetic arthropathy was confirmed by the presence of typical disturbance of superficial sensibility and characteristic changes of the head of the femur on *x*-ray examination.

231. Lumbar Puncture in Meningitis.

REICHE (*Med. Klin.*, January 2nd, 1926, p. 37) describes his procedure in lumbar puncture. He introduces two needles; fluid passes out through the lower one and air is forced in through the upper one. From 60 to 200 c.cm. of the spinal fluid can thus be removed. Disinfectants may also be introduced through the upper needle and a 40 per cent. solution of urotropine is suggested. Reiche thinks this treatment should be beneficial in all forms of meningitis except the tuberculous type. It also facilitates the *x*-ray diagnosis of internal hydrocephalus.

Surgery.

232. Intermittent Joint Effusion.

H. SCHLESINGER (*Wien. klin. Woch.*, January 15th, 1926, p. 68), who in 1903 published a monograph on intermittent effusions into joints, now reports nine additional cases of this condition, which appears as a recurrent articular swelling at regular intervals, without inflammation, endocardial disease, or permanent changes in the joint. The condition usually affects one knee, but sometimes both are involved; any other joint may be simultaneously affected, even the mandibular or an intervertebral articulation, as in one of the new cases reported. The effusion returns in the same joint with constant regularity for each patient, so that the date of the next attack can be predetermined; the interval varies in different individuals from a few days to several weeks. Paraesthesia or severe pain may precede its appearance by a few days or accompany it. The maximum extent is reached in two or three days, when the normal contour of the joint is lost; the skin is often pale and slightly oedematous, but not hot, while pressure is painless. Usually in four or five days the swelling subsides, without leaving residual periarticular or osseous changes. Fever is occasionally present at the commencement. The condition has been observed in patients over periods of twenty and even thirty years; it is more common in women and the neurasthenic. The onset has followed trauma. Pregnancy has some influence on the condition in women. It sometimes starts soon after parturition, and may continue until the next pregnancy, when it disappears until after parturition. An hereditary or familial factor is sometimes present, but often other members of the family suffer from some other disturbance of the vasomotor system, such as angioneurotic oedema, to which the author thinks the condition is analogous. He suggests that it is caused by a metabolic toxin which affects the vasomotor system, and that the gonads influence the disease in some way, since

it has not been reported before puberty or after the reproductive life of the individual is over, while it is influenced by pregnancy. He has found no treatment effective, but two of his patients recovered spontaneously.

233. The Wrist Mobility in Diagnosis.

E. F. CYRIAX (*Journ. Anat.*, January, 1926, p. 199) calls attention to a possible fallacy in testing the extent of pronation and supination when the elbow is fixed. He has demonstrated the existence of a considerable amount of passive rotation of the wrist by placing the hand, with the fingers abducted, flat upon a table and immobilizing it by holding it with the other hand while alternate pronation and supination at the wrist are performed. By a series of studies of dissected and undissected arms the amount of rotation of each of the carpal bones was found to average 24.5 and 19 degrees respectively, though considerable variations existed, especially in the case of the semilunar bone. In the living subject the range of passive rotation of the wrist, as elicited by fixing the radius and ulna with one hand and rotating the hand alternately in both directions, was found to be about 45 degrees. Cyriax adds that in attempting to break down adhesions passive rotation will frequently accomplish results unattainable by other passive movements of the wrist.

234. Haemangioma of the Breast.

B. LUBARSKY (*Zentralbl. f. Chir.*, January 9th, 1926, p. 77) states that Kornmann (Odessa) has collected eleven cases of the rare condition of mammary haemangioma, in which the diagnosis was confirmed histologically. Lubarsky now reports the case of a nullipara, aged 26, who had had a painless tumour of the inner quadrant of the right breast as large as a plum for four months. The tumour was removed under local anaesthesia: it was nodular and contained one large and a few small cysts filled with a yellowish-red fluid. The stroma consisted of firm connective tissue with few nuclei and areas of apparently hyaline degeneration; some islands of fat were seen, within and around which round-celled inflammatory infiltration had occurred. No gland tissue was found, but some excretory ducts were seen. The parenchyma of the tumours consisted of a mass of dilated capillaries, lined with swollen endothelial cells and filled with blood corpuscles. These tumours have been classified as (1) cutaneous angioma involving the nipple or areola, (2) subcutaneous haemangioma, (3) glandular haemangioma; but Klebs denied the possibility of the development of a haemangioma in glandular tissue. Other authors have stated that these tumours originate during childhood, and that trauma hastens their development. Both sexes are affected equally; according to Kornmann haemangioma is found three times more frequently in the right than in the left breast, and ranges in size from that of a nut to that of an orange or more. The tumour may be fluctuating or tense; the skin is usually unaltered, but it may be tightly stretched over the tumour and colourless, or it may exhibit numerous telangiectases. The ordinary haemangioma is usually single and painless, but in one case it was tender; it has a well defined capsule of connective tissue, but the cavernous form has none; it is diffuse, and penetrates the glandular tissue. Removal is the only treatment. Recurrence has not been reported.

235. Post-encephalitic Tic of the Diaphragm.

C. J. GAMBLE, O. H. P. PEPPER, and G. P. MULLER (*Journ. Amer. Med. Assoc.*, November 7th, 1925, p. 1485) record a case in a man aged 38, whose attack of epidemic encephalitis was followed by marked tachypnoea with nothing to explain it in the heart or lungs. The respirations were 84 to the minute. There was tremor of the outstretched hands, especially the left, and some ataxia and weakness of the left hand. Simultaneous pneumographic tracings of the chest and abdomen showed that the rapid breathing was due, not to frequent normal respiratory movements, but to definitely abnormal spasmodic contractions of the diaphragm. Chemical analysis of the blood confirmed the view that there was overventilation as a result of the tic with the synchronous and rapid respiratory movements. The respiratory centre was not receiving normal stimuli to respiration and was not sending out strong rhythmic impulses. It seemed probable that there was no actual damage to the respiratory centre itself, but that the respiratory disturbance was entirely secondary to the overventilation induced by the diaphragmatic tic. As relief had been obtained in cases of post-encephalitic hiccup by blockage of the phrenic nerves by injection of procain or alcohol, or by freezing, the authors determined to employ blockage of the phrenic nerves in the present case, which presented a similar condition. An incision was made on each side of the neck, and the phrenic nerves exposed and frozen with ethyl chloride spray. During the operation the respirations fell from 90 to 20 a minute, and the relief at the time of publication had lasted seven months.

Therapeutics.

236. Insulin in Diabetic Coma.

J. GRÉ (*Journ. de Méd. de Bordeaux et du Sud-Ouest*, January 10th, 1926, p. 7) observes that acidosis is of far greater import than hyperglycaemia, which may exist for a long period without the onset of coma. Acidosis has been attributed to destruction of the acid-basic equilibrium in the blood, and it is generally recognized that it may arise from many causes, such as starvation, nephritis, pregnancy, cyclic vomiting of children, shock, and anaesthesia. Acetone bodies are produced by defective oxidation of hydrocarbons and proteins. Gré states that importation of foreign insulin is prohibited in France, and that the various French products are insufficiently standardized, which may account for the fact that insulin has not received in France such approval as in England and America. He believes that the best results are obtained from subcutaneous or intramuscular injection; only in cases of extreme urgency should it be given intravenously, and then it must be injected very slowly. Rectal administration, he finds, is useless. In "intensive" treatment 40 units should be injected at the beginning, followed by 20 units every two hours, as long as coma persists and the percentage of sugar does not fall. If the patient's condition improves doses may be given at longer intervals, but the patient should receive 200 to 300 units during the first twenty-four hours. At the same time glucose should be administered (in 4 per cent. solution) subcutaneously, or in urgent cases intravenously. Gré points out also that American authors insist on the great importance of such adjuvants as hot-water bottles, administration of fluids by Einhorn's tube, and hot coffee or broth every fifteen minutes to arrest vomiting. After two hours lemonade sweetened with glycerin should be given, since glycerin checks the formation of ketone bodies. Orange juice may also be administered when the patient can swallow. If vomiting persists the stomach may be washed out with tepid saline solution. To stimulate the heart, digitalis, caffeine, or camphor in oil and subcutaneously should be administered. Frequent examinations of the urine should be made, the estimation of the degree of acidosis being much more important than that of the glucose content of the urine.

237. Hepatic Symptoms during Arsenical Treatment.

BERTRAND (*Bruxelles-Médical*, January 17th, 1926, p. 380) remarks that the distinction between the toxic conditions produced by arsenic and syphilis is not always clear, particularly in the case of hepatic symptoms. Early jaundice during the arsenical treatment of syphilis may be due to the massive destruction of spirochaetes (Herxheimer reaction), or to reactivation of the spirochaetes in the liver tissue—in either case of syphilitic origin. Jaundice occurring near the end of the course of treatment is much more likely to be due to the arsenic. Bertrand considers, however, that exceptions to these generalizations are not infrequent. In his experience ten out of fifteen patients gave a history of liver disease, five of them being Africans; others gave a family history of gall stones, while one had had malaria. When the jaundice appeared late in the course it could be checked readily by stopping the arsenic. The author thinks that arsenic in large doses may cause toxic hepatitis, and that the optimum therapeutic concentration lies near the toxic limit. Therefore if the latter be lowered, as by a tendency to hepatic disease, the hepatic cell may become more susceptible to the drug than is the treponema itself.

238. Chloralose in the Insomnia of the Insane.

A. MARIE and V. KOHEN (*Bull. Soc. de Thér.*, December, 1925, p. 272) state that since Richet and Hauriot demonstrated the hypnotic and anaesthetic properties of chloralose and its homologues in 1893, numerous clinicians have emphasized its hypnotic effects as well as the uncertainty of its action and the occasional appearance of nervous disturbances which have given rise to its being abandoned as a hypnotic. The uncertainty of its action must be attributed to its insufficient purification. Chevalier and Cherbuliez have shown that these drawbacks were principally due to the presence of parachloralose, from which it could not be completely freed by the old method of preparation. Since the work of Agulhon, however, a chemically pure chloralose has been obtained in the form of fine crystalline needles with a bitter taste, which are only slightly soluble in cold water, more soluble in hot water, and very soluble in oil. Richet has shown that the action of chloralose is confined to the grey matter of the cortex without affecting the bulb and spinal cord. The present authors have given the drug by mouth to 20 patients in the Sainte-Anne Asylum in doses of 0.10 to 0.60 gram for from two to eight weeks with or without interruption. The patients were suffering from various forms of mental disease in which their insomnia was not affected by

other hypnotics. Hypodermic or intramuscular injections in doses of 0.10 to 0.40 gram were given in cases where chloralose was ineffective by the mouth. The injections were not painful, but often no effect was obtained until a dose of 0.30 or 0.40 gram had been reached. When chloralose was injected intravenously in doses of 0.05 to 0.40 gram sleep accompanied by anaesthesia was obtained in fifteen to twenty minutes. The authors conclude that with the exception of the last stage of general paralysis, in which the sleep centre appears to be destroyed, clinically pure chloralose seems to be of great benefit in nervous insomnia.

239. The Use of Oil in Artificial Pneumothorax.

G. DESMEDT (*La Vie Méd.*, December 18th, 1925, p. 2039), discussing the pneumothorax treatment of tuberculosis, suggests the injection of oil into the pleural cavity. He states that it is a better compressor of the lung than air and therefore refills will be less frequently required. It can also be combined with antiseptics which have a deterrent action on the development of effusions. Desmedt uses a mineral oil and adds to it goménol, a French proprietary balsamic preparation. This antiseptic is absorbed by the pleura and fresh quantities must be introduced from time to time in order that the oil may remain completely sterile. He injects the oil also in cases of pleural effusion, and finds that the emulsion which it forms with the pleural fluid is inimical to the growth of secondary organisms.

240. Treatment of Posterior Gonorrhoeal Urethritis.

M. MICHAILOVSKY and P. M. BUTTERFIELD (*Urol. and Cut. Rev.*, November, 1925, p. 662) believe that the incidence of posterior urethritis in gonorrhoea amounts to as high as 90 per cent. In their own cases it occurred in 63 per cent. The average date of its onset in their cases was the twelfth day, the earliest date being the fourth day and the latest the twenty-eighth day. The authors recommend the following method of treatment, based on a series of fifty cases. In each case a concentrated non-irritating antiseptic solution was instilled into the posterior urethra with a No. 10 Guyon catheter. A 10 per cent. solution of silvol was the most satisfactory solution. Acriflavine in a solution of 1 in 4,080 was also largely used and in most cases well tolerated. In resistant cases solutions of protargol and argyrol and silver nitrate from 1/4 to 2 per cent. were used. Patients with acute posterior urethritis were treated twice daily, the solutions being retained in the bladder as long as possible. As the urine clears and the discharge lessens the number of injections may be reduced. Patients with chronic posterior urethritis need only one injection daily. Old and new strictures must be dilated as soon as the urine clears and gentle massage given to the prostate and seminal vesicles if their secretions show more than a normal white blood cell content. The authors' patients treated by instillations of the posterior urethra were free from infection on the eighteenth day and clinically well on the twenty-eighth day of treatment.

Ophthalmology.

241. Glaucoma in Myopic Eyes.

A. KNAPP (*Arch. Ophthalmol.*, January, 1926, p. 35) records 32 cases of glaucoma in myopic eyes, controverting the widespread—though erroneous—idea that the myopic eye is immune to glaucoma. In all these cases the glaucoma was of the chronic type with a deep anterior chamber, no great rise in tension, some excavation of the discs, which, however, was often somewhat disguised by the surrounding myopic change, and definite and characteristic field changes. The results of operation were on the whole satisfactory and compared well with the operative results of chronic glaucoma in emmetropic and hypermetropic eyes.

242. The Treatment of Painful Blind Glaucomatous Eyes.

H. NEAME and WAJID KHAN (*Brit. Journ. Ophthalmol.*, December, 1925, p. 618) describe their investigations into the occurrence of new growth of the choroid in blind painful glaucomatous eyes. In 402 cases in which glaucomatous eyes were excised 16 (4 per cent.) proved to contain sarcoma of the choroid. In all these cases there was not the least suspicion of new growth prior to excision. In this series the average age of the patients at the time of excision was well above the average age of appearance of sarcoma of the choroid and near the middle of the age period of the onset of congestive glaucoma (50 to 70). They come to the conclusion that the treatment of cases of blind painful glaucomatous eyes should be enucleation, excepting possibly in the few cases in which the media of the eye are sufficiently transparent to allow of complete examination of the fundus.

243. Inflammation of the Cornea caused by Silver Nitrate.

J. FEJER (*Amer. Journ. Ophthalmol.*, November, 1925, p. 863) describes the case of a newly born infant into whose eyes the midwife instilled silver nitrate drops as a prophylactic measure. Instead of a 1 per cent. solution a strength of 10 per cent. was used in error. Three months later the right cornea showed a round diffuse opacity the size of a pin's head in the lower and inner quarter, and the left cornea a widespread diffuse nebula in the central zone. Fejer claims that silver acetate is a much safer antiseptic for routine prophylaxis. He asserts that silver acetate prevents ophthalmia neonatorum as well as silver nitrate, that it causes less catarrh, and does not become concentrated on standing. An additional and most important recommendation is that at room temperature it is only soluble to a 1 per cent. strength, the remaining salt being thrown out of solution. It is impossible therefore for an overdose of silver acetate to be given.

244. Unilateral Proptosis due to Scurvy.

E. CLIFFORD PLACE (*Amer. Journ. Ophthalmol.*, December, 1925, p. 955) describes a case of unilateral proptosis coming on suddenly in a male infant aged 8 months. The possibility of this being due to scurvy was recognized at once, but an erroneous report of the infant's diet directed attention elsewhere. Eventually an incision was made into the orbit and the remains of a large subperiosteal haematoma situated along the orbital plate of the ethmoid was found. The child rapidly improved on a suitable diet. The ocular signs of scurvy, which may be the first and in the early stages the only signs, are protrusion of the eyeball and haemorrhage beneath the skin of the lids. The proptosis usually occurs suddenly, and often after a fit of crying.

Obstetrics and Gynaecology.

245. Pregnancy complicated by Pyelitis.

J. T. WILLIAMS (*Amer. Journ. Obstet. and Gynecol.*, December, 1925, p. 765) reports twelve cases of pyelitis complicating pregnancy, and expresses the opinion that this condition is not due directly to the pregnancy, but pre-exists in most cases. He thinks that a chronic infection is brought to a state of acute activity by the pregnancy and persists after it, the stages of development being as follows. The kidney becomes prolapsed and the pelvis dilates with or without kinking of the ureter. The excretory apparatus is strained during pregnancy, with later some compression of the ureters by the foetal head; urinary stasis follows, and infection with *B. coli*. In eight of the author's patients the right side alone was involved, and in two both sides. This preponderance of involvement of the right kidney is possibly attributable to the right lateral torsion of the uterus which is common in pregnancy; the abnormal mobility of the right kidney; the fact that the foetus more commonly occupies the right oblique diameter of the pelvis; and the close relation of the ascending colon and its lymphatics to the right kidney. Pyelographic examinations confirmed the presence of kinking of the ureter and dilatation of the pelvis. The author adds that catheterization usually proves effective.

246. Puerperal Sepsis.

E. A. SCHUMANN (*Med. Journ. and Record*, December 16th, 1925, p. 722) observes that puerperal sepsis begins almost always as a localized endometritis which may remain localized with little systemic disturbance, be followed by systemic absorption of bacterial endotoxin, or by an entrance of the invading organisms into the blood stream. The infection may spread by continuity, involving the veins of the broad ligaments, or small necrotic masses may enter the tubes and cause salpingitis. General peritonitis may occur. In a few cases the infection is autogenous. The diagnosis of these several types of puerperal sepsis is most important, the author states, since any hope of success in treatment depends on interpreting correctly the exact pathological condition. Repeated physical examinations are necessary in order that the right moment for the evacuation of a localizing collection of pus may be recognized. The general mortality is about 30 per cent., but when the *Streptococcus pyogenes haemolyticus* is the causal organism the death rate is from 60 to 80 per cent., and in general peritonitis from 85 to 90 per cent. Sapraemia, localized infection, cellulitis, and salpingitis, carry a low mortality. The author recommends the use of pituitrin and a combination of ergot and strychnine. Septic material accumulating in the vagina should be removed

by gentle irrigation at frequent intervals. Where the infection remains apparently localized in the uterine cavity attempted sterilization by Dakin's fluid is advocated. A small rubber tube with minute perforations is introduced into the uterine cavity, a light gauze plug applied to the cervix, and Dakin's solution instilled by the continuous drip method. The gauze is changed daily, and should not be placed too firmly to allow free return of the fluid by seepage through it without distension of the uterus. The author maintains that the curette, the placental forceps, and even the gloved finger have no place in the treatment of septic endometritis in the puerperium. Repeated blood transfusions and rectal injections of 5 per cent. sodium bicarbonate solution are advised. For the sterilization of the blood stream the use of a 1 per cent. mercurochrome solution in sterile water is advocated. An initial dose of about 30 c.cm. is slowly injected intravenously with a salvarsan syringe, and a violent reaction occurs in thirty minutes to six hours. Shock during the reaction is met by the administration of adrenaline, strychnine, or other cardiac stimulants; diarrhoea by the administration of opium, belladonna, and bismuth; and chill is treated by local external heat. The symptoms of reaction usually subside within forty-eight hours, when another injection of 30 to 35 c.cm. of mercurochrome solution is given. Surgical intervention is indicated, according to Schumann, only when definite evidence of localization of pus is present.

247. Treatment of Leucorrhoea.

S. RECASSENS (*Arch. de med., cir. y esp.*, January 30th, 1926, p. 207) states that leucorrhoea may or may not be of microbial origin. Before puberty the vagina contains only cocci which produce an alkaline reaction, but subsequently the invasion of the genital tract by various saprophytes causes the alkaline reaction to become acid, with the result that pathogenic organisms find it more difficult to grow in this medium. The acidity becomes more pronounced in certain circumstances, such as pregnancy, when the need for a defensive reaction is greater. The production of some forms of amicrobial leucorrhoea, in which the glycogen stored up in the genital cells plays an important part, depends on biological causes, and often on changes in the composition of the blood. Thus chlorotic girls suffer from leucorrhoea which is connected with nutritional changes in the vaginal cells, and in such cases considerable quantities of glycogen are found in the leucorrhoeal discharge. Rational treatment of leucorrhoea depends on the recognition of the nature of the process; 75 per cent. of all leucorrhoeas are due to the gonococcus. Strong solutions of the antiseptics most commonly used, such as thymol, carbolic acid, potassium permanganate, and lysol, increase leucorrhoea, while weak solutions have no bactericidal action, but cause a swelling of the epithelium and consequently an abnormal increase of secretion. Moreover, repeated irrigations may give rise to the antiseptic fluid used being converted into a culture medium. The inefficacy of vaginal irrigations has led to the use of the so-called "dry cure" of leucorrhoea, in the form of application of aluminium oxide powder or silver nitrate. Treatment of gonorrhoeal leucorrhoea with silver salts often yields satisfactory results, but sometimes very obstinate cases are encountered in which the infection has invaded the blood stream. Recassens adds that the employment of such drugs as sandalwood oil, cobaiba, cubebs, and arrheol, on the ground that they are eliminated by the kidneys and so come in contact with the infected urethra, is illusory, as in 90 per cent. of the cases gonococcal leucorrhoea is not accompanied by urethritis, and it is only in cases in which the bladder is involved that the use of these drugs is justified. Treatment by intravenous injection of various antiseptics, such as gold or colloidal copper, has not yielded the desired results, but has merely given rise to the appearance of casts in the urine.

248. Treatment of Gonorrhoea in Women by Diathermy.

P. J. VAN PUTTE (*Nederl. Tijdschr. v. Geneesk.*, January 30th, 1926, p. 437) states that, in addition to local antiseptic measures, a local non-antiseptic treatment has been introduced in the form of diathermy, which produces surprisingly good results in chronic gonorrhoea. Owing to anatomical conditions diathermy is more suitable for the treatment of the disease in women than in men. One electrode is introduced into the vagina up to the posterior fornix and the other is placed on the abdomen or on the flanks. The whole genital apparatus, including the urethra and bladder, is treated at one sitting, which lasts two hours the first day and one hour each of the three following days. The patients are irrigated twice daily with an astringent, such as potassium permanganate or copper sulphate solution. The strength of the current is not more than 1.5 amperes. The rationale of the treatment is that the application of heat to the infected tissues produces an increased formation of antibodies which destroy the gonococci.

Pathology.

249. The Presence of a Transmissible Lytic Agent in Water.

F. ARLOING and SEMPÉ (*C. R. Soc. de Biologie*, January 29th, 1926, p. 191) have found that the water of certain of the French rivers has an inhibitive or actually destructive effect on the growth of the intestinal bacteria. As examples may be quoted the antagonistic action to *B. coli* of the Saône, to *B. typhosus* of the Rhône, to *B. paratyphosus* A of the Isère, and to *B. dysenteriae* Shiga of the sea in the port of Havre. An extensive series of observations has been carried out on waters in different parts of the world. The results show that many streams possess the power of lysing one or more of the pathogenic bacteria, and that the lysin can be carried over from one culture to the next for a considerable number of passages. It is possible that this lysin may be of chemical nature, but the fact that its action is often unimpaired after several passages, and may even be exalted by this procedure, renders this supposition unlikely. Moreover, it is unusual to find purely chemical agents with the degree of specificity obviously possessed by this lytic agent. The authors consider that the lysin is probably of a similar nature to that described by Twort and by d'Herelle. If this is so it is important from a hygienic standpoint as being a hitherto unrecognized means by which the self-purification of waters is attained. It may also serve to explain why certain regions and certain persons are immune to water-borne diseases.

250. Basal Metabolism in Pulmonary Tuberculosis.

M. REALE (*Il Morgagni*, January 3rd, 1926, p. 9) has estimated the basal metabolism in 116 cases of pulmonary tuberculosis. The methods employed were the indirect calorimetric method and the more precise one of Zuntz-Geppert. In this way not only was the consumption of oxygen estimated, but also the amount of carbon dioxide produced. Most of the patients examined were undergoing the ambulatory treatment, but the clinical and pathological types of the disease from which they were suffering varied considerably. The results showed that the majority had a basal metabolism closely approximating the normal, varying generally within 10 per cent. above or below this value. In the favourable cases the values tended to be below normal; in the serious cases above normal. In some of this latter type of case the values obtained were as high as 64 per cent. above the normal. The patients with a low basal metabolism as a rule gained weight; those with a high basal metabolism lost weight. In patients with a low basal metabolism there was a slight or moderate degree of allergy, whereas in those with a high basal metabolism a state either of hyperallergy or of complete absence of allergy was noted. An increase in respiration was observed in advanced cases of pulmonary tuberculosis, generally accompanied by a rise in the basal metabolism; in less advanced cases showing an increase in respiration the basal metabolism was normal or even depressed.

251. The Chemical Nature of Tuberculin.

J. H. MUELLER (*Journ. Exper. Med.*, January, 1926, p. 1) states that "old tuberculin" is a complex product containing one substance which is responsible for the precipitin and complement fixation reactions and another which produces the skin reaction. It was observed that a solution of old tuberculin treated by peptic or tryptic digestion gradually lost its power to provoke a skin reaction in tuberculous guinea-pigs but retained its precipitating power unimpaired. Similarly, precipitation of the protein with acetic or tannic acid had the same effect. This suggested that the factor responsible for the skin reaction was of protein constitution, while the one giving the precipitin test was of non-protein constitution. This surmise was proved to be correct. By growing tubercle bacilli in a synthetic medium, and precipitating the partly evaporated fluid with alcohol, a residue was obtained consisting of a non-protein gum that gave the precipitin but not the skin reaction. By treating the culture fluid with 5 per cent. acetone, dialysing, and subsequently precipitating with dilute acetic acid, the protein fraction was obtained, and was found to give the skin but not the precipitin reaction. These two reactions are therefore caused by different substances in the tuberculin—the skin reaction by a protein fraction (or at least a fraction containing a considerable quantity of protein), the precipitin reaction by a non-protein gum. In another paper (p. 9) the preparation of the non-protein gum is described in detail. The deduction is drawn that, as the substance responsible for the toxic action of tuberculin is different from that concerned with the precipitin and complement fixation reactions, the present methods of standardizing tuberculin by *in vitro* tests must be revised.

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

252. The Clinical Course of Diabetes.

H. F. ROOT and S. WARREN (*Boston Med. and Surg. Journ.*, January, 1926, p. 45) believe that regeneration of the pancreas plays a greater part in the clinical course of diabetes than has previously been realized. They have collected a series of 26 cases of diabetes, including 6 of a very chronic type and others of an acute nature. Death in 22 of the cases was due to complications, and it is thought that the fatal issue might have been prevented in 10 cases. Arterio-sclerosis was present in 10 cases, while fibrosed coronary arteries existed with myocardial change in 11 cases. Cholelithiasis and cholecystitis occurred in 32 per cent. of cases over 25 years of age. In 13 cases hyalinization of the islets of Langerhans was found, and a variable degree of sclerosis of the islets was present in 5 instances. In 3 patients there was a slight lymphocytic invasion of scattered islets and in 5 more no obvious lesions could be found, although the number of islets was decreased in two of these five. Normal islets were present in all the pancreatic glands examined, and in 2 cases treated by insulin over a period of five months the number of normal islets seemed greater than in those patients who had received dietetic treatment alone. Root and Warren suggest that the pathological lesions in the islets are due either to prolonged functional strain or to some toxic process of a chronic nature. They point out that in haemochromatosis the type of diabetes is the same as that in diabetes mellitus, and both acinar and islet units exhibit evidence of regenerative changes. In the case of diabetes they believe that long-continued strain, either functional or caused by chronic toxaemia, slowly destroys the islets and in certain cases the acinar tissue also. Regeneration occurs, but it is followed by destruction of the newly formed units, and again new cells are formed. The rarity of uncomplicated deaths in diabetes suggests the presence of some regenerative power; the first two years are the danger period and coma is the condition to be most carefully prevented. The disturbance of the carbohydrate metabolism in diabetes mellitus, giving rise to abnormal fat and protein metabolism, may, they add, be a contributing cause of the high incidence of vascular disease.

253. Tertian Malaria with a Long Latent Period.

V. FOSSATI and C. SALVO (*Rev. Sud-Amer. de endocrinol.*, December 15th, 1925, p. 871) record a case in a man, aged 29, who contracted malaria while living in an infested district in Italy during 1919–20. The disease, however, was not manifested at the time by fever or any other symptoms, and it was only after the patient came to Buenos Aires, five years later, that symptoms of benign tertian developed and *Plasmodium vivax* was found in the blood. Cases of latent malaria were first described by Koch, who observed them in natives of Africa. Other writers, especially during the world war, found that actual malaria carriers exist, as occurs in other diseases, such as typhoid fever, cholera, etc. These carriers have been discovered by methodical examination of their blood. The present authors' patient was undoubtedly an example of the kind. His absence of symptoms was due to a natural immunity which was diminished by a combination of circumstances, which included a change of life, work, and climate. Such cases of prolonged latency are rare, and are of considerable epidemiological and social importance. Treatment by quinine is very efficacious, and should be continued for a long period.

254. Sea-Sickness.

P. H. DESNOES (*Journ. Amer. Med. Assoc.*, January 30th, 1926, p. 319) believes that sea-sickness in the healthy adult is usually due to excessive stimulation of the labyrinth. The effects on the body on the whole are, he thinks, most plausibly explained by radiation of these stimuli from their receptive centres in the brain to such associated centres as the vaso-motor, respiratory, and vagal. Other factors in the condition are fatigue of the eye muscles, disturbance of the muscular sense reflexes, irritation in the gastro-intestinal tract, and certain neurotic or psychic reactions. The immunity of a healthy adult to the effects of the ship's motion, which is usually established after three or four days, is said to be due to the brain having learned to inhibit the irritating sensations or to be less affected by them. This immunity is not permanent, but is more readily acquired on a second voyage than on a first. After many voyages complete freedom from sea-sickness may be expected, with the exception of slight relapses during severe weather conditions. Failure to acquire such immunity may be due to the presence of low-grade, chronic inflammatory foci in the gastro-intestinal tract such as colitis or gall-bladder disease; anatomical malformations and congenital anomalies; improperly balanced diets; and a possibly inherited inferiority of the adaptive mechanism of the brain. Since stimulation of the horizontal semicircular canals is the least objectionable, the recumbent position is often found to be beneficial. When the condition does not respond to treatment, careful examination is required, since a slight pre-existing cardiac incompetence may be aggravated by the efforts of vomiting and cause passive congestion of the abdominal viscera. In treatment Desnoes places main reliance on the use of scopolamine and strychnine; he has, however, obtained good results from sedatives and centrally acting hypnotics, such as chloretone and veronal. When visceroptosis exists, an elastic belt or adhesive plaster support may be very valuable. In cases of excessive vomiting that resist treatment, morphine combined with atropine must be used, and after the sleep so induced is ended the patient must not be allowed to raise his head for several hours. Careful attention must be paid to the diet and to the regular action of the bowels.

255. Active Immunization against Diphtheria.

W. BAYER (*Jahrb. f. Kinderheilk.*, November, 1925, p. 272) has recently employed the method introduced by Böhme and Riebold of using living Klebs-Loeffler bacilli for immunization against diphtheria. From January, 1924, to February, 1925, 87 infants, aged from 4 to 12 months, with positive Schick reactions, were inoculated by this method at the Berlin University Children's Clinic. The skin of the thigh or upper arm, after previous disinfection, was scarified to an extent of 1 to 2 cm. and the contents of a capillary tube containing the bacilli were rubbed in. No constitutional symptoms or sequelae were observed. The local reaction consisted in slight redness at the site of inoculation and pustule formation, which subsided in five or six days without leaving any trace. Of the 87 children inoculated 69 gave a negative Schick reaction on the tenth to twelfth day after inoculation. Nine months later 39 children were examined: 10 in whom the positive reaction had at first persisted were now found to be negative, and the remaining 29 continued to be negative. None of the children had had an attack of diphtheria in the interval. Bayer concludes that the method is inexpensive, readily applied, and yields the same results as those hitherto employed. The lack of exactness in the dosage is its only drawback.

Surgery.

256. Dupuytren's Contraction.

P. COKKALIS (*Deut. Zeit. f. Chir.*, January, 1926, p. 256), who records an illustrative case, states that Dupuytren's contraction, which usually affects only the palmar fascia, may also involve the plantar aponeurosis. Such cases, though very rare, have been described by Dupuytren himself and by Madelung. Cokkalis's patient was a man, aged 52, whose hands had been affected for the last nine years. One year after the onset of the disease in the hands the patient noticed a feeling of tension on walking, first in the left sole and later in the right. On examination both hands showed typical Dupuytren's contraction, all the fingers of the left hand being affected, and the third, fourth, and fifth fingers of the right hand. In both soles, especially the left, a tough cord could be felt beneath the skin on the mesial border of the foot and became particularly prominent on dorsal flexion of the great toe, the movement of which was decidedly less than that of the other toes. G. SPROGIS (ibid., p. 258) reports the occurrence of Dupuytren's contraction in three generations. The genealogical tree showed 17 cases of the disease, of which 15, or 88.24 per cent., were in males and 2, or 11.76 per cent., in females. Sprogis's cases confirmed the investigations of Krogius that apparently healthy women can transmit the disease. In addition to typical cases of Dupuytren's contraction there were six examples of induration of the extensor tendons of the fingers; one patient besides Dupuytren's contraction showed marked thickening of the nails, and two were imbeciles. There were no examples of os priapi, or formation of bone in the penis, which according to Hans Smend is sometimes associated with Dupuytren's contraction.

257. The Subsequent History of Benign Mammary Tumours.

P. WALZEL and F. STARLINGER (*Deut. Zeit. f. Chir.*, January, 1926, p. 152) state that from January 1st, 1903, to December 31st, 1922, 248 women and girls were admitted to the First Surgical Clinic of Vienna University with benign tumours of the breast. In 216 the tumours were classified as adeno-fibroma or fibroadenoma, and in 32 as chronic mastitis or papillary cystadenoma. Sixty-seven, or 27 per cent. of the 248 patients, presented themselves for subsequent examination, consisting of 53 whose tumours had been classified in the first group and 14 in the second. The first group of patients were mostly in the third, fourth, or fifth decennium when they came under treatment. Both breasts in this group were affected with almost equal frequency. The same is to be said of the upper two quadrants. The lower and outer quadrants were affected in 11 cases, and the lower and inner in only 4. Bilateral involvement was found in only 3. The size of the tumour in the first group ranged from that of a hazel nut to that of a hen's egg. Most were the size of a walnut or slightly larger. There was no marked difference in the size of the tumours in married and unmarried women, or in nulliparous women on the one hand and multiparous women on the other. The second group of patients were mainly in the third or fourth decennium. In 7 both breasts were affected; with four exceptions, in which the tumour was the size of the first, it was almost always the size of a hen's egg. There was no essential difference in the frequency with which the different quadrants of the breast were affected, apart from the fact that the lower internal quadrant always escaped. One case showed evidence of carcinoma of the nipple. Operation was performed in 48 and refused in 5 cases of the first group; in the second group 8 cases underwent operation. In several instances in which operation had been refused the tumours subsided spontaneously. The operation, which was almost always performed under local anaesthesia, consisted in excision of the breast with preservation of the nipple, a good functional and cosmetic result being obtained.

258. The Treatment of Recurrent Dislocations of the Shoulder and Patella.

S. S. GIRGOLAFF (*Zentralbl. f. Chir.*, January 16th, 1926, p. 138) refers to the operations devised by Plummer, Potts, Joseph, and Wülfing (see *Epitome*, August 29th, 1925, para. 157) for the treatment of recurrent dislocations of the shoulder, and describes his own procedure, which aims at strengthening the atrophied and relaxed capsular ligament of the shoulder-joint by means of a broad strip of fascia lata. The deltoid is split vertically so as to bring into view the surgical neck of the humerus below the attachment of the capsular ligament and to permit of the exposure of the acromion and coracoid processes. The shaft of the humerus is then drilled through in an antero-posterior direction; the strip of fascia lata is passed through this canal and crossed over the outer aspect of the capsular ligament. The ends of this fascial strip are then sutured to the two processes, that from the posterior surface of the humerus being brought forward and fixed to the coracoid process, while that from the anterior surface of the humerus passes backwards and is attached to the acromion process. A suture is fixed in the fascial band at its crossing and the ends are sutured to the capsular ligament and periosteum. Girgolaff performed this operation upon three men and one woman during 1925. He reports that so far the functional results are excellent, but the operations are too recent for judgement as to the permanence of the benefit. He has employed the same method of fixation in recurrent patellar dislocation. The patient was a powerfully built seaman, who, after the operation, recovered full movements of the joint without recurrence of the patellar dislocation.

259. Lumbar Pain treated by Sympathectomy.

O. BITTMANN (*Lyon Chir.*, November–December, 1925, p. 757) points out that pain in the lumbar region is one of the most common affections met with in females after puberty. Not only the gynaecologist but all practitioners meet them, and the condition is very difficult and unsatisfactory to treat; opinions differ widely as to their cause and pathology. The pain is usually situated in the lower part of the body, specially in the lumbar region, and varies considerably in character and duration. In a large series of cases the condition was found to be associated with a considerable variety of other affections, the most frequent one being that of general asthenia. This is an affection accompanied by a general visceroptosis, associated with nervous dyspepsia, and defined as neurasthenic dyspepsia. This asthenia may be congenital or acquired. Nine cases of this disease are recorded in detail. The treatment adopted was laparotomy together with periaortic sympathectomy; it is based on the opinion that there is some chronic inflammatory disease present in one or other of the abdominal organs—in these cases usually in the pelvic region. The nerve fibres of the sympathetic are reflexly irritated by this condition, causing pains in different parts of the body. Interruption of the nervous arc by removal of the sympathetic plexus is stated to be a simple procedure, free from danger, and apparently followed by encouraging results.

Therapeutics.

260. Treatment of Malignant Pustule.

M. SALOMONE (*Studium*, January 20th, 1926, p. 12) states that since the introduction of antianthrax serum the mortality from the disease in Italy has been reduced to 5.3 per cent., and that if the diagnosis is made early and the treatment properly administered it should be reduced to *nil*. Out of sixty cases of malignant pustule treated by himself and two colleagues during the last few years only two, which came under treatment late, were fatal. Salomone always uses the thermo-cautery and has abandoned excision, as this procedure opens up the blood vessels and allows the organisms to enter the circulation. In some localizations of malignant pustule, such as the eyelids, the cautery should not be employed and the specific serum only should be used, as the scar left by the malignant pustule is less disfiguring than that caused by the cautery. An ointment composed of copper sulphate and yolk of egg is very effective when there is no constitutional disturbance. When the pustule is well developed and accompanied by oedema the cautery should be used, followed by hot fomentations containing boric acid in the case of the eyelids and 1 in 1,000 perchloride for other parts. Injections of 5 per cent. carbolic acid should be made all round the oedematous area. The dose of specific serum is determined by the pulse and temperature. If the temperature is below 102.2° and the pulse under 130, 20 to 30 c.cm. is a sufficient dose for an adult; it should be given daily until the temperature becomes quite normal. If the temperature is high and accompanied by severe constitutional disturbance, the dose should be increased, and 20 c.cm. should be given intravenously. Digitalis is useful in these cases in view of the tendency for the vagus to become paralysed.

261. Iodine in Exophthalmic Goitre.

R. R. FITZGERALD (*Canadian Med. Assoc. Journ.*, February, 1926, p. 159) reports an investigation into 148 cases of goitre which, in addition to operative treatment, had received administrations of iodine, either in the form of Lugol's solution or of resublimed iodine in hydriodic acid. Lowering of the basal metabolic rate occurred in nearly all the cases, irrespective of the kind of iodine used, and the two forms of iodine produced practically the same amount of diminution in the rate, and within the same length of time. It was found necessary, however, to give nearly four times as much resublimed iodine as Lugol's solution to produce the same clinical result. Lugol's solution was given in daily doses of from 6 to 20 minims, and the resublimed iodine dissolved in hydriodic acid in doses of 100 to 200 mg. of iodine daily. The advantages gained by the use of iodine were the shortening of the period of pre-operative rest that was necessary, and the abolition of distressing post-operative reactions. Many cases previously considered inoperable were rendered suitable for surgical treatment.

262. Protein Therapy in Resistant Syphilis.

R. D. HERROLD (*Journ. Amer. Med. Assoc.*, February 6th, 1926, p. 413) reports that the intramuscular injection of gonococcus protein, combined with the intravenous injection of neo-arsphenamine, exerts a markedly favourable influence on the reduction of the Wassermann reaction and on the clinical course of resistant syphilis, especially in the case of glandular enlargements. His patients had had three previous courses of treatment—with neo-arsphenamine intravenously, mercuric chloride intramuscularly, and potassium iodide by the mouth—and the Wassermann reaction was still positive in each case. The protein used consisted of a clear extract of gonococci in normal saline solution, its strength being 500 million per cubic centimetre. Four injections, each of 15 to 20 minims, were given intramuscularly in the gluteal region at intervals of three days and five days. After the last injection a combined administration of neo-arsphenamine intravenously and protein intramuscularly was continued twice a week for four weeks. In each case the Wassermann reaction either became completely negative or was markedly decreased in degree after one course of the combined treatment, and the lymph nodes diminished in size. No adverse symptoms of any kind were observed as a result of the combined treatment.

263. Vaccine Treatment of Typhoid Fever.

L. Y. ESPINOSA (*Bruxelles-Méd.*, January 10th, 1926, p. 357) states that as a general rule the first doses of typhoid vaccine should be determined by the patient's sex, age, and fever, and the stage of the disease; subsequent doses should be estimated from the amount of reaction caused by the first. Small doses should be employed at first and their strength gradually increased; 50 million as a rule should be the initial dose. The vaccine should be given as soon as the clinical diagnosis is made, without waiting for bacteriological confirmation. When the patient's condition permits vaccine treatment should be preceded by a purge or an intestinal disinfectant such as calomel. Hitherto the only serious contraindications for vaccine treatment have been a hypertoxic infection or hyperpyrexial attacks of the ataxo-adynamic variety of typhoid fever. Cardiac complications are not a contraindication, except during the early stage. The presence of pulmonary complications requires reduction in size of the doses, and on the occurrence of intestinal haemorrhage the treatment must be temporarily suspended. Hyperpyrexia, syncopal attacks, and much enlargement of the spleen also require suspension of the treatment. The unpleasant effects of vaccine therapy consist in a local reaction at the site of injection which is soon relieved by hot applications, a slight rise of temperature which becomes less marked after subsequent injections, and sweating. The good effects are a sensation of well-being and increase in strength, return of appetite, and shortening of convalescence.

264. A. CAVAZZUTI (*Il Policlinico*, Sez. Prat., October 26th, 1925, p. 1485) treated 23 typhoid patients with antityphoid serum. Three injections, each consisting of 10 c.cm., were given, with one or two days' interval between; 16 recovered and 7 died. He also treated 24 patients with antityphoid vaccine. Of these 13 had previously received antityphoid serum without any improvement, and 11 were given the vaccine only. Only 3 of the 24 cases died. Apart from slight rashes and pain in the joints no bad effects were noted from the use of antityphoid serum and vaccine. Cavazzuti recommends that the vaccine should be given early in the disease and its use continued after the fall of the temperature so as to avoid relapses.

Dermatology.

265. Attenuated Forms of Acne Varioliformis.

R. SABOURAUD (*Paris méd.*, January 16th, 1926, p. 59) describes atypical forms of acne which occur on the scalp as well as on the body, affecting more severely the middle of the face and chest and the vertebral groove. The crusted top of the lesion comes off, leaving a little ulcerated cone covered with clear exudation which then cicatrizes like a small-pox papule. The morbid process is a necrotic one affecting a hair follicle, sometimes with its attendant sebaceous gland. The course is characterized by successive crops, each preceded by local discomfort. In children local medication is quickly effective, but in the middle-aged the disease may be much worse and more intractable; it has even led to suicide. In young subjects, also, the characteristic distribution on the forehead and temples may lead to a suspicion of the syphilitic "corona veneris." In most patients every form of bread should be strictly excluded from the diet. As with all acnes, sulphur has proved to be the sheet-anchor in local treatment, and the author recommends that it be applied in an ointment of lanoline, vaseline, and resorcin.

266. Treatment of Acne by Testicular Implantations.

L. L. STANLEY (*Urol. and Cut. Rev.*, January, 1926, p. 6) remarks that the sexual organs have a certain influence on the skin, as is shown by the following occurrences. Ringworm of the scalp is nearly incurable in children, but at puberty disappears without any treatment. A dermatitis symmetrica dysmenorrhoeica has been described. All kinds of skin diseases have been influenced by menstruation. Pigmentation during pregnancy is well known. Seborrhoea often disappears in pregnancy. In myoma of the uterus loss of the hair has often been observed. Scleroderma beginning at the menopause has been described. All these facts point to the existence of relations between the skin and the general condition. Stanley, who records 17 illustrative cases, with photographs showing the condition before and after treatment, treated 66 cases of acne in men aged from 18 to 65 by transplantation of testicular substance. The experiments, which were first made in 1918 with testes from executed criminals, were sufficiently encouraging to warrant further investigations. In 1921 a method for transporting testicular substance from animals to man was devised, the glandular substance of the testis, including the interstitial cells and the semniform tubules, being injected beneath the skin of the abdomen. As the result of the treatment 54 patients, or 82 per cent., were benefited, and 18 per cent. showed no change.

267. The Etiology of Psoriasis.

R. BERNHARDT (*Ann. de Derm. et de Syph.*, January, 1926, p. 27) dismisses the theory of the bacterial origin of psoriasis as being incapable of proof and does not consider the disease hereditary in the strict sense of the term. The statistics (varying, according to different writers, from 15 to 44 per cent. of familial cases of psoriasis) show that there is some innate and latent inherited predisposition of familial type which causes the skins of these persons to react to a variety of stimuli. Bernhardt draws an analogy between psoriasis and freckling of the skin, in which such an hereditary predisposition is manifested under the influence of solar rays. Similarly, in psoriasis there is, he thinks, some hereditary specific property of the skin to react, and certain external causes which act as irritants can be defined. Anaphylaxis is also apparently a preponderant factor, since, without this, it is impossible to understand why some members of these families remain free from psoriasis, although living under similar conditions; why psoriasis may appear in elderly patients; why certain patients have recurrences at definite periods; and finally, why untreated psoriasis may disappear completely. He defines psoriasis as a congenital, hereditary, and familial tendency to react to different agents, both exogenous and endogenous, after sensitization of the skin; among the endogenous causes endocrine defect must be considered. Bernhardt's statistics show thyroid deficiency in 42 per cent., gonad deficiency in 22 per cent., and thymus deficiency in 21 per cent. of cases; but the physiology of the endocrine glands is not yet sufficiently understood for any etiological conclusions to be drawn.

268. Salicin in Psoriasis.

G. PERNET (*Arch. Derm. and Syph.*, January, 1926, p. 111) advocates the use of salicin in the treatment of psoriasis. He states that it should be administered in solution, being ineffective in tablet form, commencing with 1 gram in 30 c.cm. of water (approximately 15 grains to the ounce), increasing to 1.2, 1.5, or even 2 grams three times a day immediately after meals, tragacanth for its suspension being necessary in the larger doses. During its administration only soothing local applications of lead lotion and occasional sodium bicarbonate baths should be used, chrysarobin and tar preparations being avoided. A case is recorded in which salicin taken regularly and perseveringly had given an interval of eleven years' freedom from an attack, after failure under arsenic and salicin in tablets. The drug does not terminate eruptive attacks, but it was found that fresh elements ceased to appear and the earlier ones became involuted. It has no effect upon old chronic patchy psoriasis. Not being a prophylactic its indefinite continuance is useless after its effects have been obtained in an acute or subacute attack. Pernet has found it useful in attacks of spreading psoriasis in children, young women, and in nursing mothers in whom psoriasis may become acute and generalized as the result of lactation. Those severe and extensive cases seen in elderly people are benefited by rest in bed, and soothing oily calamine applications with salicin internally in increasing doses combined with nux vomica if necessary. In the acute generalized form associated with rheumatoid arthritis in women whose nutrition was lowered it was found that the rash was diminished and the joints were improved by its administration.

Obstetrics and Gynaecology.

269. Treatment of Severe Uterine Prolapse.

E. SOLMS (*Zentralbl. f. Gynäk.*, January 30th, 1926, p. 263) quotes Stoeckel as stating that failures result in 87 per cent. of severe cases of uterine prolapse treated by operations which, without involving fixation of the uterus to the vagina, the abdominal wall, or the pelvis, consist simply in shortening of the uterine ligaments. He thinks that little advantage is to be gained by such surgical shortening in young women suffering from severe prolapse, in whom, because of the risk of sterilization, vaginal or other forms of interposition are avoided. Rather than perform a ligament-shortening operation in these cases he advises treatment for a time by pessary. In order that this may be retained in the worst cases, he sutures folds of skin from the labia majora over the perineum—a procedure that can also be employed in senile asthenic subjects in whom operation is dangerous. In thirteen cases of severe prolapse he has had lasting success from an operation consisting of fixation of the fundus of the uterus to the symphysis pubis, the uterine body being fixed to and

between the bladder and the recti abdominis muscles, with the cervix directed towards the umbilicus. The action of the intra-abdominal pressure, he states, can only result in a raising of a uterus which has been fixed in this position.

270. Varicose Veins of the Female Pelvis.

L. A. EMGE (*Journ. Amer. Med. Assoc.*, November 28th, 1925, p. 1690) gives a statistical report of twenty-four cases of varicose conditions in the female pelvis, and states that a definitely circumscribed varicocele is of rare occurrence. Venous disturbance causing temporary or permanent dilatation is usually of a varicoid nature and involves one or more divisions of the ovarian and uterine circulation; it is therefore not easily dealt with by surgery. He believes that this condition is mainly due to damage of the fibro-elastic supporting tissue and is only occasionally produced by degenerative changes in the actual walls of the veins. The author's treatment is based on the intimate attachment of the pelvic peritoneum to the suspensory tissue. He has found that by shortening the sacro-uterine and associated ligaments, together with transplantation of the round ligaments, traction can be exerted on the peritoneum and control of the veins obtained with disappearance of large varicose vessels. This method has given freedom from symptoms for from one to seven years and has also removed varicosities due to childbirth. He thinks that resection of the veins is only necessary when some organic disease of the vein walls is present.

271. Thymus Extract in Obstetric Practice.

N. TEMESVÁRY (*Zentralbl. f. Gynäk.*, February 6th, 1926, p. 322), after an intensive trial of thymus extract, reports that it is no more potent in inducing abortion than any other single medicament. At most it produces slight pain, and must be supplemented by such agents as laminaria tents before useful uterine contractions ensue. Sometimes, but not always, when an abortion has already started, thymus extract will hasten its conclusion. With regard to premature birth the same rule holds—namely, that the extract will act only on a uterus made sensitive previously. Its chief use is in encouraging early contractions, at which stage hypophysin is either without action, or else, by producing a continuous pain, involves the risk of uterine rupture or of asphyxiation of the child. In practice the author uses a mixture of both drugs, and claims that complete safety is thereby secured. The preparation acts as well in a first as in later pregnancies, but the pains must be true pains, and not those sometimes felt three or four weeks before the onset of labour. He adds that thymus extract is unsuitable as a substitute for ergot after expulsion of the placenta because the contraction induced is clonic, not tonic.

272. The Value of Radiography in Pregnancy.

S. GENELL (*Gynécol. et Obstét.*, January, 1926, p. 41) refers to a case recorded by Essen-Moller in 1920 in which a skiagram, taken immediately before delivery, showed three foetal heads. He reports a somewhat similar case. A primipara, aged 29, was admitted to hospital when seven months pregnant. There was generalized oedema, especially of the lower extremities, and albuminuria. Two foetal heads could be felt and foetal heart sounds were heard in each flank, with a "silent area" in the mid-line. The diagnosis of "twin pregnancy" was made. Skiagrams of the abdomen and pelvis showed two foetal heads and the shadow of a vertebral column between those of the heads, which obviously belonged to neither. One week after admission labour commenced, and three female children were born alive, but in spite of injections of pituitrin and ergot the uterus failed to contract. The patient lost about 1,200 c.cm. of blood, and died ten hours after the termination of labour. The author emphasizes the value of skiagrams in all doubtful cases of multiple pregnancy.

Pathology.

273. Experimental Transmission of Leprosy.

J. REENSTIERNA (*Ann. Inst. Pasteur*, January, 1926, p. 78) reports the experimental transmission of leprosy to two species of monkeys—*Macacus sinicus* and *M. rhesus*. The infective material was derived from two untreated patients who during the preceding year had developed generalized leprosy of the nodular form. A saline suspension of the ground-up lepromata was injected in the supraorbital and malar regions of both sides of the face, in the pubic region, and into both nostrils. Three days later all signs of the inoculations had disappeared. On the thirty-ninth day a small round hard nodule was visible over the right malar bone. Similar swellings appeared later over the other sites of inoculation with the exception of the nasal mucosa, which remained intact. The nodules increased in size till on the seventieth day they varied from a small pea to a nut. Pieces were excised from some of them and were injected into guinea-pigs and monkeys; both sets of animals remained well. Microscopic examination of the excised tissue showed typical leprosy bacilli in films. Sections demonstrated the presence of granulation tissue containing large mononuclear, often vacuolated, cells; some giant multinucleated cells; and round the peripheral portion lymphocytes, polymorphs, and plasma cells. Acid-fast bacilli were found within the large mononuclear cells. Shortly after the removal of the nodules the remaining lesions commenced to decrease in size; they ultimately disappeared. Similar results were obtained with two other sinicus and four rhesus monkeys. The incubation period varied from about five to eight weeks. The nodules reached in some instances the size of a small plum; they disappeared as a rule in from six to ten weeks. Clinically and histologically they closely resembled human lepromata. Acid-fast bacilli were uniformly found in films, but only occasionally in sections. Reinoculation of two of the animals gave rise to the disease again, in each case with a shortened incubation period—nineteen and twenty-two days respectively. Passage experiments were unsuccessful, and in no case was the disease transmitted to guinea-pigs. The author concludes that the disease reproduced in the monkeys was a localized form of leprosy.

274. Effect of Carbon Dioxide on the Growth of the Tubercle Bacillus.

THE gaseous requirements of the tubercle bacillus are of importance in connexion with its ability to grow in the body. G. E. ROCKWELL and J. H. HIGHBERGER (*Journ. Infect. Dis.*, January, 1926, p. 92) have carried out a number of experiments to determine the part that is played by carbon dioxide in the growth of the tubercle bacillus and the saprophytic acid-fast bacilli. Novy recently came to the conclusion that this gas was of no importance, and explained the results that have pointed to the contrary as being technically fallacious. One of the main errors that is likely to confuse the investigator is the action of dehydration on the medium. To control this the authors have made careful measurements of the loss of water throughout their experiments. The technique used was to incubate the culture tubes over water, sulphuric acid, or alkali, and to calculate the amount of growth that ensued. Briefly, they found that the best growth occurred over sulphuric acid, the next best over water; in the tubes incubated over alkali there was very little growth—never more than a few discrete colonies. The inhibitive action of the alkali was not due to dehydration, because this was not nearly so marked as in the tubes incubated over acid. It appeared to be due to the absorption by the alkali of the carbon dioxide in the atmosphere over the tube. When the alkali was saturated with carbon dioxide—that is, when the tube was incubated over sodium bicarbonate—profuse growth occurred. The authors therefore conclude that carbon dioxide is a vital factor in the growth of the tubercle bacillus.

275. The Wassermann Reaction in Congenital Syphilis.

F. BRUNETTI (*La Clinica Pediatrica*, November, 1925, p. 685) states that the foundling hospital at Rome was one of the first to use the Wassermann reaction in the diagnosis and prognosis of congenital syphilis. In 1910, or three years after discovery of the reaction, the director, Professor Flamini, was one of the first to show that the reaction in the newborn was often negative, even when the mother was syphilitic, and that the reaction in the child was very rarely positive before the tenth day of life, especially in cases in which syphilitic manifestations were absent. From 1921 to the first half of 1925 the Wassermann test was performed 2,846 times at the hospital, and there were 2,000 Sachs-Georgi and 440 Meinicke reactions. The patients were divided into the following three groups: (1) Mothers and children with active syphilitic manifestations. In this group the Wassermann reaction was always positive both in the mother and the child. (2) Mothers and children in whom the evidence of syphilis was doubtful. In these cases the reaction was positive in 70 per cent. of the children and 80 per cent. of the mothers. (3) Mothers and children in whom there was not the slightest evidence of syphilis. In this group the reaction was positive in 8 per cent. of the children and in 15 per cent. of the mothers. The Sachs-Georgi reaction gave less conclusive results than the Wassermann reaction, being positive in only 76 per cent. of the mothers, and in 62 per cent. of the children belonging to the first group, and the percentage of positive Meinicke reactions was still less. The occasional lack of correspondence between the Wassermann reaction in the child and that in the mother and the possibility of detecting syphilis in the child from examination of the mother's blood alone render it necessary that the Wassermann test should be performed on the largest number of mothers possible as well as on all the children.

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

276. Cardiac Infarction.

H. A. CHRISTIAN (*Amer. Heart Journ.*, December, 1925, p. 129) considers cardiac infarction (coronary thrombosis) a condition easily recognizable by simple clinical methods. Since the pain in such cases may be referred to the abdomen, with fulminating and alarming symptoms simulating some lesion therein, the importance of correct diagnosis is obvious, lest, as not infrequently happens, an unnecessary laparotomy be performed. The differentiation of the condition from angina pectoris is essential, seeing that cervical sympathectomy might be advised in the latter case but is contraindicated in cardiac infarction. A history of varying degrees of precordial or epigastric distress without any evidence of cardiac insufficiency is suggestive, and in most cases the occurrence of the infarction is marked by pain which predominates over other symptoms. A few patients are without pain, but become collapsed and dyspnoeic with a feeling of impending death. The pain, which is always deep-seated, is generally felt behind the upper portion of the sternum, or it may be entirely below the diaphragm. The frequent history of attacks of "indigestion" without any definite cause suggests that such attacks may have been occasioned by slight vascular myocardial disturbances. Dyspnoea out of all proportion to any demonstrable pulmonary or cardiac lesion is a striking characteristic, and the most constant physical sign is a weak cardiac action with a poor arrhythmic pulse. Crackling râles at the bases of the lungs are nearly always present. The blood pressure is lowered after an attack and there is slight fever. Treatment consists in morphine for the relief of pain and absolute rest for as long as the blood pressure remains lowered, with avoidance of nitroglycerin. Christian prefers the intravenous or intramuscular administration of caffeine to digitalis, and for grave circulatory failure 1/4 c.cm. of 1 in 1,000 epinephrin solution intravenously or intracardially.

277. Convalescents' Serum as a Protection against Varicella.

A. G. MITCHELL and S. F. RAVENEL (*Arch. of Ped.*, November, 1925, p. 709) injected intramuscularly 68 patients who had not previously suffered from varicella with 2 to 10 c.cm. of convalescents' serum within from one to seven days after exposure to the disease: 4 developed typical varicella in from seventeen to twenty-one days after exposure, and 64 showed no signs of the disease during a period of thirty days' observation after exposure. The ages of the patients ranged from 1 month to 27 years, and the percentage of those exposed who developed varicella was 4.4. After exclusion of 13 patients who were over 15 years of age and 11 who were under 6, the incidence of those developing the disease in the remaining 44 was 6.8 per cent. Twelve children were re-exposed to varicella twenty-one days after the injection of serum, six were re-exposed thirty-two days and three forty days after injection. One of the children re-exposed on the twenty-first day developed varicella, but the rest escaped. The authors' conclusions are as follows: (1) Varicella convalescents' serum has sufficient protective power against the disease to warrant its collection and employment in prophylaxis in hospital wards in the case of children whose nutritional state or general health is poor. (2) In view of the uncertainty of dosage it is probable that more than 4 c.cm. should be injected intramuscularly. (3) The serum should be given, when possible, within three days after exposure to varicella. (4) The serum is apparently protective for as long as eleven months after collection. (5) The temporary immunity conferred by varicella convalescents' serum possibly lasts as long as fifty days.

278. The Cardiac Symptoms of Aerophagia.

G. T. FLORA (*Thèse de Paris*, 1925, No. 514), who records numerous illustrative cases, states that the cardiac symptoms which may be caused by aerophagia are tender spots in the left submammary and precordial regions, extrasystoles, palpitation and tachycardia, faints, anginal attacks, and acute asphyxia. Angina pectoris associated with aerophagia is usually of mixed origin, the angina being due to a cardio-arterial affection and the aerophagia being a favouring cause. In exceptional cases, however, aerophagia alone may be the cause of the anginal symptoms, as Flora shows in two of his cases. The most dramatic episode caused by extreme distension of the stomach and colon is the syndrome denominated "acute asphyxia," which is characterized by four cardinal symptoms—namely, very intense respiratory disturbance causing orthopnoea, cyanosis, small rapid pulse, and disappearance of all the symptoms under the influence of oesophageal catheterization. As regards the pathogenesis, any severe vaso-sympathetic shock, like that caused by gaseous distension of the stomach and colon, is capable of affecting the neighbouring regions, which accounts for the cardiac symptoms of aerophagia. The prognosis is generally favourable, but an anginal attack caused by an impulse arising from the vagus may in rare cases give rise to sudden death. The prognosis of acute asphyxia is very grave unless it is relieved by oesophageal catheterization. The treatment consists in combating aerophagia by regimen and appropriate drugs, and the hyperexcitability of the vagus by belladonna, which often has a good effect.

279. Musculo-spiral Paralysis after Serum Treatment.

A. CARRAN (*Arch. Lat. Amer. de Ped.*, October, 1925, p. 1158) states that in 1911 Thaon published a case of partial neuritis of the brachial plexus with atrophy and paralysis of the muscles of the shoulder following injection of antitetanic serum. Subsequently Lhermitte drew attention to this sequel of serum treatment, and in 1924 about twenty-four cases were published, mainly in the *Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris*. Carran now reports the case of a boy, aged 13, who, after receiving 20 c.cm. of antitetanic serum for a wound in the right foot, developed left musculo-spiral paralysis, which was still present six months after the onset. The paralysis could justifiably be attributed to the serum, as it appeared at the same time as the other serum phenomena. In two-thirds of the cases on record the cause of the paresis was antitetanic serum, the next most frequent causes being diphtheria antitoxin and antistreptococcic and antipneumococcic serums. In most of the cases small doses have been employed for a prophylactic or curative purpose in subjects who have not been injected before, so that there could be no question of anaphylaxis. The subcutaneous route has been used in almost all the cases, so that the sequel is not more frequent after intraspinous or intravenous injection. Almost all the cases have occurred in adults, children being rarely affected. The clinical picture varies from a slight paresis to a complete paralysis. The commonest forms are neuritis localized to a single nerve, the left musculo-spiral being most frequently involved, though cases have been reported in which the vagus, recurrent laryngeal, and optic nerves have been affected; plexitis and radiculitis, especially of the brachial plexus, frequently in a dissociated form such as the Erb-Duchenne type; more or less generalized polyneuritis in the form of hemiparesis or hemiplegia, with or without amyotrophy or sensory changes; and finally myelitis, which in one case assumed the form of Landry's ascending paralysis, with death of the patient from involvement of the bulbar centre. Some authorities regard the condition as due to oedema and infiltration of the nerve trunks, while others attribute it to fixation of the toxin in the nerves. Prophylaxis should consist in adopting the method advocated by Besredka and others of injection of sodium carbonate and daily ingestion of large doses of sodium citrate or calcium chloride before the appearance of serum sickness. Auto-haemotherapy has been recommended by A. Haedo, Zerbino, and others.

280. Intravesical Pressure.

F. VICENTINI (*Arch. Ital. di Urol.*, November, 1925, p. 93), who records twenty-eight illustrative cases, states that when the bladder is at rest the intravesical pressure is related to the muscular tonus of the organ. The curve of a perfectly normal evacuation of the bladder should be absolutely regular, but in practice it is affected by various individual or general factors which may lead to misinterpretation. In pregnancy the intravesical pressure is higher than normal, the highest values being found in primigravidae. Affections in the neighbourhood of the bladder may or may not affect the intravesical pressure according to their nature. In vesical affections the pressure may be greatly or only slightly above the normal, but it is always proportionate to the gravity and duration of the lesions. The characters which distinguish an abnormal from a normal curve of evacuation are the higher degree of pressure and a fall of pressure disproportionate to the quantity of fluid evacuated. Changes in pressure and in the curve of evacuation are due in some cases to hypertrophy of the vesical musculature and in others to hypersensitiveness of the bladder wall, which responds to stimuli in an abnormal manner.

281. The Serum Prophylaxis of Measles.

R. DEBRÉ, H. BONNET, and C. DECAM (*Rev. d'Hygiène*, January, 1926, p. 24) describe the results they have obtained from the prophylactic injection of immune serum in patients or normal children exposed to measles. In March, 1925, a special laboratory was established in France for the collection of serum from convalescent and recovered cases of measles. From March 1st to November 18th 2,897 c.cm. of serum was collected, mostly from adults; this was equivalent to 555 doses. The serum has been used chiefly for controlling epidemics of measles that have broken out in children's hospitals, but part has been devoted to the protection of normal children in families in which a case of measles has developed. With the results the authors are entirely satisfied. Of children inoculated prophylactically 83.5 per cent. have been completely protected and 12.5 per cent. have had only a mild attack; not a single fatal case has occurred. Numerous instances are cited in which the serum appears to have been the means of rapidly controlling an epidemic, and many instances in which serum-injected children have escaped, while the control non-injected children have developed measles. Although no strictly comparable data are provided, the authors state categorically that during the time mentioned 875 children have been protected from measles.

282. Pleurisy in Scarlet Fever.

H. BERNARD (*Thèse de Paris*, 1925, No. 506), who records four illustrative cases, comes to the following conclusions: (1) Scarlatinal pleurisy is rare. (2) It is often purulent, but frequently remains sero-fibrinous. (3) It is almost always secondary to pulmonary lesions, which are frequently very slight and require looking for, but often escape detection. (4) The streptococcus and pneumococcus are the organisms most frequently found in the effusion. The presence of the tubercle bacillus is more frequently indicated by the cytological formula than by its actual discovery in the effusion. As soon as the effusion occurs, therefore, thoracentesis should be performed in order to determine the cytological formula and bacteriological nature of the effusion. (5) There is no antagonism between tuberculosis and scarlet fever. The two affections may exist concurrently, and the supervention of one does not necessarily imply aggravation of the other. But in the tuberculous subject who is debilitated scarlet fever may assume a malignant character. Much more frequently scarlet fever rouses into activity a dormant or latent tuberculous focus. (6) The prognosis of scarlatinal pleurisy is generally favourable apart from tuberculous pleurisy and empyema which has received inadequate surgical treatment. (7) The treatment of scarlatinal pleurisy is the same as that of any other pleurisy.

283. Meningococcal Ependymitis.

VIALARD and DARLEGUY (*Bull. et Mém. Soc. Méd. des Hôp. de Paris*, January 14th, 1926, p. 14), who record four illustrative cases in soldiers, state that ependymitis is always present in meningococcal cerebro-spinal meningitis, at least in those forms beginning with mainly encephalitic signs, such as delirium, mental confusion, and coma. They do not think trephining is always necessary in the adult, followed by intraventricular injection of serum, as Lewkowicz suggests, since they have seen such patients recover after early and massive doses of serum given intraspinally. If, however, after energetic treatment by the intraspinal route has been continued for two or three days, and the physical and psychical symptoms do not subside, while the signs of cerebral blockage become definite, it is imperative to bring the serum into direct contact with the ependymal walls themselves, and if necessary into the region of the base of the brain by trephining followed by puncture. The procedure is simple and should be adopted without delay when there is any doubt as to the possibility of pyocephaly developing.

284. Relapsing Fever.

A. Z. PÁRAMO (*La Medicina Ibera*, January 9th, 1926, p. 29), who records five illustrative cases with their temperature charts, states that relapsing fever occurs in the province of Toledo, the transmitting agent in most cases being an acarus of the family of Ixodidae, a parasite of the pig. In some cases relapsing fever may be transmitted by lice which have been infected by persons suffering from the disease. Páramo thinks it probable that relapsing fever is a disease of the pig, and that the ixodide mentioned is the intermediate parasite between the animal and man. The incubation period is between five and seven days, and the prodromal period from one to twenty-four hours. Headache and pains in the legs are constant during the febrile period. Splenic infarction is rare. After the fever has subsided the temperature remains below 96.8° F. for two or three days. Recovery is spontaneous.

Surgery.

285. Resection of Long Bones for Osteomyelitis.

G. I. BAUMAN and H. E. CAMPBELL (*Surg., Gynecol. and Obstet.*, January, 1926, p. 114) describe sixteen cases of subperiosteal resection of the diaphyses of long bones for chronic osteomyelitis. The patients selected for operation had had discharging sinuses from four months to four years. In all twenty-one resections were performed, five patients having two each. Out of nine femora which were resected, in only one case, a man aged 40, did regeneration fail to occur; in this case, however, the union was becoming firmer after a year and a good functional result appeared probable. Of six tibias three united perfectly, two have failed to unite, and one fractured at the end of two years with poor union, but later became firm under immobilization treatment. One ulna out of two resected failed to unite. Two c[illegible]cles, one fibula, and one humerus have regenerated per[illegible]tly. The authors suggest that the good blood supply to the femur is responsible for the excellent results, while the defective supply to the tibia and the bones of the forearm explains the failures in these regions. The calcium metabolism was, however, not investigated. They resect as much of the diaphysis as has become diseased, and the periosteal edges are stitched together over perforated rubber drainage tubes which are allowed to project from the wound. Through these tubes the cavity was irrigated with Dakin's solution for two to five weeks, depending upon the duration and character of the discharge. The patients were kept in bed with extension for eight to ten weeks and then allowed to walk with crutches and a cast or brace until the sixth month; partial weight-bearing with the cast or brace was then permitted until the eighth or tenth month. The authors do not recommend resection of the tibia except when nothing less radical will remove the infected bone, but they state that in properly selected cases submucous resection of the long bones in cases of chronic osteomyelitis, together with subsequent bone grafting if necessary, offers the best chance of cure.

286. Tuberculosis of the Sacro-iliac Joint.

M. N. SMITH-PETERSEN and W. A. ROGERS (*Journ. Amer. Med. Assoc.*, January 2nd, 1926, p. 26) report the results of arthrodesis in thirteen cases of sacro-iliac tuberculosis during the last seven years, and conclude that a more optimistic attitude is now justifiable with regard to this disease. In diagnosis they emphasize the following points. Pain radiating over the posterior aspect of the thigh and leg was present in ten of the cases, and tenderness over the inferior sacro-iliac ligaments and sacro-sciatic notch was invariably present. In no case was sensitiveness found at the lumbo-sacral junction, and the authors regard this absence of pain as a positive indication of sacro-iliac tuberculosis. In two cases in which the entire gluteal region and the lower abdominal quadrant were sensitive to touch the patients had psoas and gluteal abscesses. In the majority of cases there was an increased range of movement in the sitting position as compared with the standing, due to the elimination of leverage on the joint by the hamstring muscles. In only one-third of the cases was pain elicited by compression of the iliac crests. In the early stages of the disease rectal examination brought to light an increased density along the joint line and in the soft tissues at its inferior margin; in the later stages there was also erosion of the joint line and atrophy of the ileum and sacrum. In all cases *x*-ray examination showed that there was destruction of the joint surfaces and adjacent bone; an increased density was present in more than half the cases. Four deaths occurred in a series of thirteen patients. In one case there was a pre-existing extensive abscess which became secondarily infected after the patient had left hospital against advice. In the second case Pott's disease supervened, followed by tuberculous meningitis. The other patients died from tuberculous peritonitis more than a year after the operation; in no case was death attributable directly to the operation. The remaining nine patients returned to their previous occupations, and had been at work for an average of seven months; three of them had been at work for more than six years without local recurrence or the appearance of secondary foci. Post-operative fusion occurred in all the cases, with cessation of pain.

287. Cysts of the Urachus.

M. PATEL and R. LABRY (*Gynécol. et Obstét.*, 1925, xii, No. 6, p. 449) state that large closed cysts of the urachus are extremely rare; more commonly the whole of the urachus is canalized, giving an umbilico-vesical fistula; or the canal is closed at the umbilical end but at the other communicates with the bladder, forming a variety of vesical diverticulum. Cysts which originally were closed not uncommonly acquire,

as a result of accumulation of their contents, secondary communications with the exterior or the bladder. As a rule the fluid within closed cysts contains a considerable amount of effused blood, but in a personal case here recorded the liquid was non-albuminous and limpid, with a specific gravity of 1007. Acute traumatic rupture has not been recorded. The cystic swelling is strictly mesial and gives rise to a swelling closely resembling the pregnant uterus. These features, together with its adherence to the umbilicus, may in the case of moderate sized cysts render possible a pre-operative diagnosis, but usually the swelling is taken for an ovarian cyst or an encysted effusion in connexion with peritoneal tuberculosis. Although the cyst is entirely extraperitoneal it is best at operation to open the peritoneal cavity, when a portion of the parietal peritoneum can be excised with the cyst. Dissection of the cyst from the bladder is often difficult.

288. Treatment of Varicose Ulcer.

J. MEYER and R. WEILL-SPIRE (*Journ. de Méd. et de Chir. Prat.*, January 25th, 1926, p. 49) state that in dealing with varicose ulcers excision of veins or of the ulcer itself is giving place to treatment by injections so as to produce venous sclerosis. After the ulcer has become clean and non-oedematous, and the inguinal glands are no longer swollen, an injection of 50 cg. of sodium citrate in 1 c.cm. of distilled water is made into the varicosity, the needle being entered perpendicularly to the surface. Immediately on withdrawal a pad of cotton-wool is applied, and kept firmly in position by pressure for twenty minutes. It is important that there should be no escape of fluid, and the first injection may be more dilute, higher concentrations being used later according to the patient's reaction. A start should be made with veins in healthy tissue an inch or two above the ulcer. Other substances recommended include sodium salicylate 20 to 40 cg. in 1 c.cm. of distilled water, quinine 10 to 20 cg., and urethane 5 to 10 cg. The amount injected should always be 1 c.cm. This treatment is said to be applicable to about two-thirds of all cases of varicose ulcers. Insulin has been applied to the base of the ulcer, even in the absence of permanent glycosuria, in view of the fact that hyperglycaemia is not uncommon with varicose ulcer.

289. Gastro-jejuno-colic Fistulas.

R. APPELMANS (*Rev. de Chir.*, 1925, No. 10, p. 757), having had two cases of this condition under his care, records their histories and has traced eighty-five similar cases in the literature. An interesting feature of these cases was that they all occurred in men. These fistulas followed both an anterior and a posterior gastro-jejunostomy. They are generally found on the anterior aspect of the jejunum, and usually follow operations for duodenal ulcer, very rarely operations for cancer. The ulcer often makes its appearance one or two years after the gastro-enterostomy. In the two cases described the fistula occurred sixteen and nineteen months respectively after the first operation. The symptoms are those of peptic ulcer—pain, vomiting, and often haematemesis. When the fistula becomes established diarrhoea is the most common symptom. It is often very profuse, and the faeces contain recently ingested food. There is often eructation of foul gas, which clinches the diagnosis. Radiography will clearly demonstrate the fistula; bismuth appears in the colon a few minutes after the test meal has been taken. The prognosis is bad; the surgical operation is difficult and dangerous, but without it death is certain to ensue in a short time. Preventive treatment aims at the avoidance of fresh ulcer formation; unabsorbable sutures should not be used, and care should be taken at the first operation not to cause traumatism and occlusion of the pylorus. Curative treatment includes the closure of the fistula and re-establishment of the continuity of the bowel. If the first ulcer is still active, gastro-enterostomy must be repeated. It may be best to excise the old gastro-enterostomy, the fistula, the colon, and the jejunum after the new channel has been formed. In both recorded cases the recovery was complete.

290. Non-venereal Prostatitis.

T. BAKER (*Journ. Amer. Med. Assoc.*, November 21st, 1925, p. 1606) holds that prostatitis due to non-venereal causes is commoner than is generally realized, amounting to 15 to 20 per cent. of all cases. The importance of recognizing a non-venereal cause is obvious in the interests of the patient; sociological and economic considerations are involved, and correct diagnosis is necessary for treatment. The author remarks that many cases are due to focal infections or arise as sequels of acute infections. Further investigation is necessary, but it appears already that these non-venereal cases are often more resistant to treatment and prone to relapse than gonococcal infections.

Therapeutics.

291. Mercurochrome-220 in Chronic Septic Endocarditis.

A. W. FALCONER (*South African Med. Record*, January 9th, 1926, p. 14) discusses the intravenous treatment of chronic septic endocarditis with mercurochrome-220. Other observers have reported successful results in the treatment of septicaemias due to various causes by intravenous injections of mercurochrome, and cures have been claimed in erysipelas, streptococcal pneumonia, septicaemia caused by staphylococci and *B. coli*, pyelonephritis, puerperal sepsis, subacute endocarditis, and gonorrhoeal infections. Notes of three cases of subacute malignant endocarditis are given, in two of which 25 to 35 c.cm. of a 1 per cent. solution of mercurochrome were administered intravenously on several occasions. A definite temporary improvement resulted, as shown by diminution in the size of the spleen, disappearance of Osler's nodules, and a general improvement in the appearance and feelings of the patients, but in neither case was a fatal issue averted or life materially prolonged. Although the injections produced considerable reactions with severe intestinal irritation and high fever, the temperature generally settled down when the reactions were over. The third patient refused further injections after the first, from which no improvement was noted.

292. Application of Cold in Dermatology.

P. LORTAT-JACOB and P. LEGRAIN (*Presse Méd.*, January 30th, 1926, p. 131) say that the application of cold has a wide field of application in skin diseases. They use a cryocautery which can be recharged directly from a carbon dioxide container; regulation of dosage is easily obtained by a pressure screw and interchangeable nozzles. Each application lasts from ten to thirty seconds. The principal indications are angioma, naevi, lupus erythematosus, keloid, and small baso-cellular epitheliomata; to these must be added various affections of the mucous surfaces, such as leucoplasic patches on the tongue and cheek. Repeated applications at five-day intervals are required for their disappearance. Cervicitis necessitates much longer application and a special form of instrument; moreover, since the treatment tends to sclerosis and is not disinfectant, the cervicitis must not be a virulent type. Treatment by cold (crymotherapy) is valuable in that it is easy of application and leaves no scar. The pain is much less than that caused by "carbonic snow," and the authors state that they have not known any patients abandon treatment for this reason.

293. Treatment of Hay Fever.

E. W. PHILLIPS (*Journ. Amer. Med. Assoc.*, January 16th, 1926, p. 182) has obtained very good results from treating twenty-nine patients suffering from hay fever with daily intradermal injections of pollen extract. After determining the degree of sensitization and the size of the initial dose, the subsequent increase in dose was adjusted to the tolerance of each patient, the aim being to produce a local reaction about the size of the patient's palm which subsides within twenty-four hours. In some cases the dose could be doubled on each treatment, while others only tolerated a 50 per cent. increase. Care was taken to select a fresh site for each injection in order to avoid desensitized areas and to ensure a brisk local response. Intradermal injections were found painful if more than 0.25 c.cm. was introduced into one wheal, and accordingly stronger dilutions of the pollen extract had to be prepared. Complete relief occurred quickly in each case; six patients were made comfortable by the first dose, others improved in less than three days, and the longest refractory period was seven days, with six doses. Phillips states that such injections are safe provided that the reaction from the preceding dose has begun to subside, and the ratio of increase is calculated carefully. He gives the warning that this form of treatment should only be employed by those who are familiar with the particular extract concerned.

294. The Use of Pimpernel in Intestinal Affections.

H. LECLERC (*Bull. Soc. de Thér.*, December 9th, 1925, p. 278) states that recognition of the astringent properties of the pimpernel (*Poterium sanguisorba*) can be traced back to the time of Attila. Its chemical composition has not been investigated since the end of the seventeenth century, when the Royal Academy of Sciences discovered that it contained "much acid, much volatile salt, much oil, and earth." It is well known, however, that the reactions produced in its decoction in the presence of iron salts indicate the presence of tannin in large amounts, to which must be attributed its powerful antidiarrhoeic action. Leclerc has recently employed an infusion of the plant for infants suffering from entero-colitis. In most of the cases he noted a marked reduction of the hypersecretion from the intestinal mucous

membrane and rapid disappearance of streaks of blood from the stools. An equally satisfactory result can be obtained by using a tincture of the plant. In addition to its astringent effect the pimpernel possesses very marked carminative properties when taken a few minutes before meals.

295. Sodium Bicarbonate in Polycythaemia.

SCHUERMANS (*Le Scalpel*, January 23rd, 1926, p. 76) has had favourable results after giving sodium bicarbonate in two cases of Vaquez's disease—polycythaemia vera—and in two cases of secondary polycythaemia. He suggests that polycythaemia is affected by the acid base equilibrium of the blood, but admits that his treatment of these cases has been empirical. To three of his patients he gave 10 grains thrice daily and to the fourth 5 grains. In every case the red blood corpuscles diminished by about 25 per cent. during administration, though the haemoglobin and the white blood cells were relatively unaffected. Coincidently with the diminution of the red blood corpuscles there was noticed an improvement in the patients' general condition, especially relief of pain in the long bones. When the administration of sodium bicarbonate was interrupted the erythrocytes rapidly returned to their former numbers.

296. Stovarsol in Chronic Respiratory Disease.

V. KOHEN (*Bull. Soc. de Thér.*, December, 1925, p. 287) has found that stovarsol (acetyl-ammon-hydroxy-phenyl-arsonic acid) has a favourable action when given by mouth to subjects of chronic bronchitis, tracheo-bronchial adenopathy, bronchial and pulmonary sclerosis, emphysema, inactive pulmonary tuberculosis, or chronic rhinitis, in an average dose of 0.50 gram given for periods of ten to fifteen days at a time, interrupted by intervals of equal duration. The cough, expectoration, and dyspnoea diminish and even disappear, the permeability of the nostrils becomes re-established, and the general condition is greatly improved. The only contraindication to the use of stovarsol is hepatic and renal insufficiency, shown by an eruption with or without fever. The drug can be given to children in smaller doses without any harm. Kohen does not suggest that most of the chronic affections of the respiratory tract are of a syphilitic nature, but maintains that pentavalent arsenic in this form frees the respiratory and intestinal tracts of waste matter and has a favourable action on their functions.

297. Tannic Acid as an Intestinal Astringent.

J. W. C. GUNN (*South African Med. Record*, January 9th, 1926, p. 11) discusses the behaviour of tannic acid in the intestine in the treatment of diarrhoea. He states that to be of any value in those cases due to inflammation after the passage of an irritant it would be necessary for tannic acid to precipitate protein all along the intestinal tract. Experiments indicate, however, that precipitation of proteins occurs mainly in the stomach and duodenum, and that as the acid passes along the intestines the less acid the contents become and the less favourable is the reaction for precipitation. After long trial of tannic acid in the treatment of moderately severe cases of dysentery and diarrhoea no difference in progress was noted between those patients receiving it and others treated as controls, while in the very severe types tannic acid had no effect at all. From his own observations as well as from the experience of other investigators Gunn concludes that treatment with tannic acid in mild cases of diarrhoea is unnecessary, while in severe cases it is useless.

Disease in Childhood.

298. The Effect of Early Treatment of Congenital Syphilis in Children.

G. GARDEL (*Thèse de Paris*, 1925, No. 520) states that of 80 children with more or less definite signs of congenital syphilis who had received early treatment and been kept under observation for several years 72, or 90 per cent., survived and 8 succumbed. Death in 5 of the 8 fatal cases was due to an intercurrent infection. Syphilis by itself was rarely the cause of death, which is not surprising in view of the fact that there were few severe cases with grave visceral lesions. Among all the manifestations of congenital syphilis eruptions entailed the gravest prognosis (6 out of 20 cases were fatal), as they were an indication of septicaemia. The earlier they appeared after birth the more serious they were likely to be. Eruptive cases constituted 80 per cent. of the deaths. In fatal cases death almost always occurred in the first year, especially in the first six months (in 7 out of 8 cases). The child's future depends mainly on the conditions of hygiene and the environment in which it is brought up. None of the cases observed by Gardel were admitted to hospital and almost all (70 per cent.) had been fed at the mother's breast, or at least had had a mixed diet (13 per cent.). Of the 72 survivors who had undergone more or less regular mercurial treatment 48, or 66.6 per cent., were absolutely normal at the time of the last examination, and 24, or 33.3 per cent., showed stigmata of congenital syphilis. Sequelae were relatively rare and generally mild. In view of the fact that every severe case of congenital syphilis with profound visceral lesions or considerable mental impairment has never had the slightest treatment, it is concluded that apart from cases with early cerebral lesions every case which is recognized and treated early escapes severe late sequelae.

299. Nutritional Keratomalacia.

A. B. SCHWARTZ (*Journ. Amer. Med. Assoc.*, December 26th, 1925, p. 2025) reports a case of keratomalacia occurring in an infant and following deprivation for three weeks of the fat-soluble vitamin A. Breast-fed until 10 months of age, the baby later developed a "toxic dyspnoea" with stupor and intractable constipation; this was treated by a diet of oatmeal water and a proprietary infant food for three weeks. The infant was then admitted to hospital, the outstanding symptoms being stupor, irritability on being disturbed, loss of weight, pallor, doughy skin, dry inflamed mouth, cracked lips, fever, and the characteristic corneal ulceration. The liver was unusually large and firm; there were symptoms of meningeal disturbance and a transient strabismus. The cerebro-spinal fluid showed only slight diminution in the sugar content with no pleocytosis or increase in globulin. The infant assumed the frog-like attitude occasionally seen in scurvy, but which might have been due to the gluteal injections of cod-liver oil which were being given daily. In addition to this lactic acid milk and orange juice were given by the mouth; quartz lamp radiation was also employed. The child made a slow but complete recovery except for loss of vision in the right eye, in which there had been extensive ulceration of the cornea.

300. Hypertelorism.

E. A. COCKAYNE (*Brit. Journ. Child. Dis.*, October–December, 1925, p. 265) refers to the previous cases reported by D. M. Greig and D. C. Muir (see *Epitome*, September 19th, 1925, para. 223), and reports two cases which came under his own observation in a female child aged 7 months and a boy aged 6 years. From consideration of the six cases now on record Cockayne concludes that hypertelorism is congenital but not hereditary. He points out that there is nothing in any of the family histories to support Greig's contention that it is due to an hereditary want of balance in development occurring in a family marked by Nature for extinction. It is probable that the multiple abnormalities present are caused by a deficient oxygenation of other tissues which occurred at the same time as that of the chondrocranium.

301. Anaesthesia in Young Children.

P. ERLACHER (*Wien. klin. Woch.*, January 21st, 1926, p. 98) has performed major operations on infants under anaesthesia produced by rectal injections of hedonal in 10 cases and combined hedonal and local anaesthesia in 54 cases. The conditions treated thus included inguinal hernia, appendicitis, umbilical hernia, removal of angioma, and hydrocele. The method was also used for orthopaedic operations and blood transfusions. In two cases of congenital dislocation of the hip the combined anaesthetic effect was found to be inadequate. The patients ranged in age from 3 months to 4½ years. The dose of hedonal was 0.5 gram for an infant of 3 months, 0.75 gram up to 9 months, 1 gram up to 1 year, and 1.5 grams for over 1 year. The weight and physical condition of the child were also taken into account, and generally an amount of 0.15 to 0.2 gram per kilo of body weight was found sufficient. The bowel was washed out by a simple enema two hours before the operation. The hedonal was dissolved in 30 c.cm. of rice water and introduced into the rectum, and the buttocks were then strapped together to prevent its being evacuated. It was found that in ten to fifteen minutes the child sank into a natural sleep, and after half to three-quarters of an hour the necessary degree of insensibility was reached. During this time the child should be protected from all external stimuli—light, shaking, noise. If the sleep was not sufficiently deep local anaesthesia was used. Immediately after the commencement of the operation the bowel was washed out to prevent unnecessary duration of the narcosis. The infant was usually awake after three hours, taking food well and not vomiting, which fact the author considers of great importance in infants. In one case the administration of hedonal was followed by collapse, which was treated by strychnine, a supposed specific antidote for hedonal poisoning.

Obstetrics and Gynaecology.

302. Endometrioma.

S. B. HERD (*Journ. Obstet. and Gynaecol. of the British Empire*, Winter No., 1925, p. 649) states the conclusions derived from microscopical study of twenty-five cases in which endometrial tissue was present in abnormal pelvic situations, giving rise to the tumours which were formerly described as adenoma or adenomyoma, but have recently been called endometrioma. In their advanced stages as "chocolate" or haemorrhagic cysts with tarry contents, or in other formations—in the uterus, ovaries, ligaments of the uterus, recto-vaginal septum, or elsewhere—these tumours have been held to take origin (1) by direct extension from the uterine endometrium, (2) from serous (peritoneal) epithelium, (3) from Wolffian relics, (4) from germinal ovarian epithelium, (5) by implantation of endometrial fragments which have passed from the uterine cavity through the Fallopian tubes to the pelvis, whence they penetrate the ovary or other organ from without. The last-named view, elaborated by Sampson, is confirmed by many recent workers, and finds support in microscopical demonstration of retrograde menstruation in the human subject, and in the development of small "adenomatous" tumours after experimental implantation of endometrial fragments in the pelvis of the rabbit. That the adenomatous tissue is endometrium is proved by its showing menstrual reaction corresponding with the phase of the uterine endometrium, as well as its atrophy at the menopause and decidual reaction in pregnancy. Herd has found microscopical evidence of endometrioma originating in several ways. In the uterus he considers the tumour is nearly always due to direct extension from the endometrium, which seems to be endowed in certain cases with peculiarly invasive faculties. In the ovary, the endometrial tissue, he finds, gains access by (1) extension from the endometrium along the ovarian ligament, (2) implantation of fragments after retrograde passage through the Fallopian tubes, (3) conversion of the tubal epithelium in the abdominal ostium into endometrium, which then invades the ovary, (4) alteration of the capsular epithelium, (5) developmental errors—such as inclusion of part of the Müllerian duct in the ovary. Elsewhere in the pelvis endometriomata are due to extension of endometrium, developmental errors, implantation through the Fallopian tube, or extension from (or rupture of) an endometriomatous tarry cyst. Clinically neither physical signs nor symptoms are characteristic, but the patient is most frequently aged from 30 to 50 and has intramenstrual dysmenorrhoea. Sterility is very common, and attacks of acute pain are often associated with the ovarian tumour; the presence of a fixed backward uterine displacement, with or without fixed adnexal swellings and tenderness, is suggestive.

303. Treatment of Fibromyomata of the Uterus.

FRANCES A. FORD (*Surg., Gynecol. and Obstet.*, February, 1926, p. 245) has made a comparative study of representative groups of patients treated in the Mayo Clinic for fibromyomata of the uterus, either by operation or by radiotherapy, surgical treatment being employed in 250 cases, while 344 received radiation treatment. The author points out that a small submucous fibromyoma responds usually to a small dose of radium, whereas a large tumour or a pedunculated tumour should receive a combination of radium and *x* rays or *x* rays alone. A relatively high percentage of the cases treated by radiotherapy required further treatment, either repeated radiation in 18 per cent., or operation in 13.7 per cent., as compared with 4 per cent. of the surgical group who received a second treatment. This is attributed to injudicious selection of cases or to inadequate dosage. Hard fibromyomata containing extensive calcium deposits cannot be reduced satisfactorily by radiation, and an incarcerated pelvic tumour should be removed surgically because of the inability to exclude adnexal disease. A radiogram may occasionally assist diagnosis by demonstrating calcium deposits within the tumour. The need of extreme care in excluding malignant disease was shown by the fact that in six of the patients treated by radiotherapy a well established malignant process appeared within one year of the treatment. Malignant disease also appeared later in other patients, and the question is raised whether a focus of relatively devitalized tissue, with an altered blood supply, may favour malignant change. The author pleads for careful recording of the history of the subsequent life of all patients treated with radium or *x* rays, so that more information may be obtained in this respect.

304. L. MARTINDALE (*Journ. Obstet. and Gynaecol. of the British Empire*, Winter No., 1925, p. 690) reports a series of 252 cases of fibromyoma of the uterus treated either by surgical operation or intensive *x*-ray therapy. Of these cases 111 received *x*-ray treatment and 141 were treated by hysterectomy or myomectomy. The Freiburg technique of *x*-ray therapy was employed in the first 51 cases, and the remaining 60 cases were treated by a modification of the Erlangen technique, which allows precision of dosage. Martindale points out that it is dangerous to use intensive *x*-ray therapy for any case except those in which it is fairly certain that there is no complication and that the diagnosis is clear. *X*-ray therapy is the ideal treatment in the case of a fibroid uterus well under the size of a six months' pregnancy, the growths being interstitial rather than subperitoneal, and the chief or only symptom being profuse menorrhagia. It is also justifiable in the presence of grave heart disease, when surgical treatment is impossible; the improvement in the general health of such patients is remarkable. In all cases of doubtful diagnosis the possibility of carcinoma of the body of the uterus must be eliminated by dilating the cervix and curetting if necessary. In other doubtful cases, and especially in young women, an exploratory laparotomy, followed by hysterectomy or myomectomy, is the correct treatment. The advantages of *x*-ray treatment include the elimination of nervous shock, of the inconvenience of an anaesthetic, and of the long convalescence and nursing home expenses. The author adds that the climacteric symptoms have been considerably less troublesome in patients treated by *x* rays than in those treated by operation. The danger of a severe *x*-ray burn occurring renders it essential that the treatment should be administered carefully and accurately calibrated installations be employed.

305. Molar Pregnancy and Hysterectomy.

LÉVY-SOLAL and R. DUPONT (*Gynécol. et Obstét.*, January, 1926, p. 46) describe the case of a primipara, aged 18, who was admitted to hospital suffering from intractable vomiting; she was approximately two months pregnant. Twelve days later symptoms suggesting acute appendicitis occurred, and four days afterwards laparotomy was performed. One ovary was as large as an apple and contained a typical lutein cyst; the appendix was long and bent. Vomiting persisted, and the next day a mole was expelled, but this did not arrest the vomiting. The patient grew weaker and was slightly jaundiced. Histological examination of the mole showed signs of malignancy, and total hysterectomy was performed thirty days after admission. Vomiting ceased immediately, and the patient was discharged well a month later. In the mole there were signs of early malignant changes around some of the villi, and at the fundus of the uterus two small yellowish masses were present which showed early invasion of the uterine wall by large mononuclear and polynuclear cells, grouped irregularly between the muscular fibres. The authors observe that the great majority of cases of chorion-epithelioma occur after a molar pregnancy, and they advocate a very careful histological examination of the mole. If cells suggesting malignancy are discovered they urge that total hysterectomy should be performed without delay. They comment also on the absence of records of the histological examination of moles in the voluminous literature dealing with the incidence of chorion-epithelioma following the expulsion of a mole.

306. Treatment of Hyperemesis Gravidarum.

V. J. HARDING and H. B. VAN WYCK (*Amer. Journ. Obstet. and Gynecol.*, January, 1926, p. 1) consider that the successful treatment of hyperemesis gravidarum depends upon the use of fluids, and they describe a routine procedure which has given excellent results during the last four years. This consists in the intravenous injection of 1,000 c.cm. of 1 per cent. saline solution containing 5 per cent. glucose every day until diuresis is obtained, as evidenced by the twenty-four hour output of urine reaching 1,000 c.cm., with a specific gravity of 1010 or less. During treatment the patient is isolated and rectal enemata of 200 c.cm. of 10 per cent. glucose in normal saline solution are given three times a day, with the addition of 30 to 60 grains of sodium bromide in each enema for the first day or two. No solids are given by the mouth, but the patient is encouraged, even if vomiting freely, to drink any liquid she likes, except tea, coffee, milk, or cocoa. The treatment is not continued for more than six days if there is no clinical improvement, but usually this is so marked within three or four days that the patient is able to take food, the average for fourteen cases being 4.1 days from the commencement of treatment to the cessation of vomiting and the taking of food. Briefly, the treatment consists in rest in bed with isolation and the forcing of fluids by all routes, the use of glucose being secondary in importance to the use of fluids. Glucose solutions injected intravenously give rise to no untoward results if proper care as regards sterilization, temperature, and slow rate of administration is taken. While the vomiting of pregnancy is usually not characterized by acidosis, there is always a ketonuria arising partly from the accompanying starvation, but this is not a causative factor of the condition.

Pathology.

307. Diagnostic Value of the Cerebro-spinal Fluid Sugar Content.

W. P. STOWE (*Journ. Lab. and Clin. Med.*, January, 1926, p. 307) has estimated the sugar content of the cerebro-spinal fluid in 122 cases of nervous disease of different types. The technique adopted was the method of Folin and Wu, essentially the same as that employed for blood sugar. Cell counts were made in a Fuchs-Rosenthal chamber. Ten normal fluids gave a range of sugar from 60 to 90 mg. per 100 c.cm., the average value being 83 mg.; this is considerably higher than the amounts that have been considered normal by French workers. In neuro-syphilis fifteen cases gave values of 60 to 91 mg., thus showing no departure from the normal. Of twenty cases of encephalitis lethargica examined only two showed departures from the normal value, in each case in excess. Twenty-one cases of proved tuberculous meningitis had a sugar content of 10 to 50 mg.; fourteen cases of purulent meningitis had values of 0 to 25 mg. These results show that in neuro-syphilis, lethargic encephalitis, and other neurological conditions the deviation of the sugar value from the normal is so slight as to be devoid of diagnostic significance. In tuberculous meningitis the sugar is well below normal, but not so low as in the cases of purulent meningitis, in which it is frequently absent. This reduction or disappearance of sugar in infective meningitis is a valuable aid in differentiation from cases in which the spinal fluid is purulent without being actually infected—as after intraspinal therapy, in brain tumours, and sympathetic meningitis. In these, even though pus cells are often abundant, the sugar content remains normal.

308. The Path of the Rabies Virus in the Nervous System.

E. W. GOODPASTURE (*Amer. Journ. Path.*, November, 1925, p. 547), following his earlier work on herpes, inoculated the virus of rabies into the right masseter muscle of rabbits. Negri bodies were always demonstrable in the right motor nucleus of the fifth cranial nerve, in the left nucleus, and widely in the central nervous system. The most severe lesions were always found in the pons, medulla, and cervical cord, and they were apparently more extensive on the right side. Lesions in the sensory division of the fifth cranial nerve and in the cells of the corresponding Gasserian ganglion suggest an axis-cylinder transmission of the virus. Goodpasture found that the action of the virus upon the cells of the fifth motor nuclei was relatively slow and mild as compared with its effect upon the nerve cells of the Gasserian ganglion. Negri bodies appeared in the fifth motor nuclei, but it was rare to find actual necrosis, though degenerative changes might be marked. In the Gasserian ganglion, however, most of the cells died without the appearance of Negri bodies. This was in striking contrast to the action of the virus of herpes simplex, which rapidly causes necrosis of the ganglion cells first attacked—namely, those of the right fifth motor nuclears following an inoculation into the right masseter muscle. The cells of the brain are apparently more strongly resistant to the virus of rabies than those of the Gasserian ganglion, and the author suggests that this very resistance might be responsible for the development of Negri bodies in greater numbers. The impression he has gained is that the various structural changes observed in ganglion cells, including the appearance of Negri bodies, are the result of the action of the virus upon the cell and the reaction of the cell to the resulting injury. A focal degeneration of neuro-fibrillar material occurs which melts and coagulates or coheres about one or more of the structures which result from mitochondrial degeneration of axis cylinders and nerve cells. He believes that neither the virus itself nor a characteristic structural change which may be regarded as a constant accompaniment of the virus has yet been demonstrated. The hypothesis is advanced that the degenerative changes observed in axis cylinders are the result of the passage of the virus along these processes, and indicate its manner of extension from one focus to another.

309. The Metabolism in Marasmic Infants.

F. F. TISDALL, T. G. H. DRAKE, and A. BROWN (*Amer. Journ. Dis. Child.*, December, 1925, p. 829), as the result of experimental work, report that there is no evidence that the marasmic infant is less able to digest and absorb carbohydrates than the normal infant, providing there is no diarrhoea present. The heat output per kilogram of active metabolic tissue is approximately normal in the marasmic infant. The only abnormality they have been able to find in the carbohydrate metabolism in marasmus is that the average fasting blood sugar content is about 10 per cent. lower than that of the normal child; from this they infer that the glycogen store of the marasmic infant is below normal, and they conclude that there is probably an increased heat loss in these infants. For this reason, and also to promote the building up of a store of glycogen and fat, they recommend that the feeding should be calculated upon the basis of 70 to 100 calories per lb. of body weight per day, as compared with the 45 calories required by the normal infant. In another article (ibid., p. 837) they state that in infants with diarrhoea, infection, or acute intestinal intoxication there is derangement of the carbohydrate metabolism which is not primarily associated with defective production of insulin.

310. Bacteriology of Goitre.

A. CANTERO (*Surg., Gynecol. and Obstet.*, January, 1926, p. 61) has investigated the bacteriology of chronic colloid or adenomatous goitres. He made cultures of the thyroid tissue in 50 goitres under aseptic conditions immediately after removal of the gland by the surgeon. A large surface of the gland was seared by a hot blade, punctured with a sterile pipette, and some fluid removed. About 1 c.cm. of the tissue was also removed through the seared surface with sterile instruments. The excised tissue was passed rapidly through a flame, washed three times with normal saline solution, and emulsified in a sterile air chamber with normal saline solution and sand. The pipetted fluid and the emulsion were inoculated on various media. In only three cases was there failure to obtain a growth. Organisms of the streptococcal group were isolated in 31 out of the 50 cases, staphylococci in 7, pneumococci in 5, *B. welchii* in 2, and a diphtheroid, *B. pyocyaneus*, and *Micrococcus tetragenus* in one case each. Cantero suggests that organisms of the streptococcal group may be an important factor in the pathogenesis of goitre, especially since enlargement of the thyroid gland and true thyroiditis are often associated with localized streptococcal infections. He refers to the previous work of Rosenow in 1914, who recovered non-haemolytic streptococci from 25 out of 32 cases of goitre in man and from 8 out of 12 cases of goitre in dogs. Cultures of these organisms when injected repeatedly into dogs gave rise to loss of weight, diarrhoea, and thyroid enlargement, while in one case softening and pulsation of the thyroid developed together with marked tachycardia and tremor.

311. Splenomegaly of the Gaucher and Niemann Types.

W. BLOOM (*Amer. Journ. Path.*, November, 1925, p. 595) contributes a study of two cases of the unusual symptom complex associated with large cell splenomegaly described by Gaucher in 1882, and three cases of a condition frequently confounded with Gaucher's disease, and first described by Niemann in 1914. The two cases of the Gaucher type were a Jewish boy, aged 6, and a Jewish woman, aged 42; in both cases the spleen was removed. The clinical signs are marked chronicity, leucopenia, mild secondary anaemia, slight tendency towards bleeding, a peculiar brown-yellow pigmentation of the skin, splenomegaly and cirrhosis of the liver without ascites. Peculiar large pale cells occur in the liver, spleen, lymph nodes, and bone marrow. Numerous observers state that these cells are reticulum cells and possibly certain endothelial cells which have stored large amounts of a substance closely allied to cerebrin. The Gaucher cells with certain stains, especially with Mallory's aniline blue connective tissue stain, show a distinct longitudinal striation of the cytoplasm. They frequently give a positive iron reaction with the Turnbull blue method. There is no typical lipoid staining. Both patients improved after splenectomy, and there was no evidence of progression of the disease. The three cases of the Niemann type reported were in Jewish infants, aged 16 months, 14 months, and 7 months respectively. Niemann's disease is characterized clinically by its appearance in infancy, under 2 years, with impairment of growth, by anaemia, leucocytosis, and by a large spleen and liver; there is no evidence of diabetes or lipaemia during life or at necropsy. These cases are also characterized by the presence of large, pale, lipoid-containing cells, apparently derived from the reticulo-endothelial system, in the pulp of the spleen and lymph nodes, in the thymus, mucosa of the intestine, and medulla of the adrenals, and by the presence of lipoid material in the clasmatocytes of the connective tissue, in the Kupffer cells, and in large cells lying free within the alveoli of the lungs. In sharp contrast to the Gaucher cells, the large pale cells in these cases stain positively for the complex lipoids; they do not contain iron and are markedly vacuolated after treatment with absolute alcohol. Splenectomy was performed in one case; some improvement was noted for two months, when the child began to fail and died later. The author suggests the term "lipoid histiocytosis" for cases of the Niemann type, as tending to convey the idea of a process involving the storing of lipoid material by the histiocytes throughout the body.

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

312. Epigastric Distress.

A. MCPHEDRAN (*Canadian Med. Assoc. Journ.*, February, 1926, p. 121) discusses in detail the etiology and treatment of gastric discomfort and pain, with or without acidity. He finds that gastric distress is more common in the anxious and energetic type of patient, the usual cause being spasm of the stomach excited by air imprisoned by spasm of the œsophagus and pylorus. The author does not think that high gastric acidity is the primary cause, and attributes the discomfort to irritability of the gastric nerves, or rather to their centres in the spinal cord. The production of acidity is due to vagal stimulation, and the acidity frequently excites the spinal centres and induces gastric spasm. This can be promptly relieved by such antacids as sodium bicarbonate and magnesia. Some cases are due to chronic focal disease within the abdomen, especially of the gall bladder, appendix, stomach, and duodenum, which increases the irritability of the spinal and pneumogastric centres; a searching examination should therefore always be made of these organs, and *x* rays assist in doubtful cases. Other causes may be eye-strain, or disease of the ear, teeth, or tonsils, the pain being referred to the stomach through the vagal and spinal centres. Cardiac symptoms, such as irregularity of beat and premature ventricular systoles, may occur, and increased salivary secretion is frequent. Stress is laid on dealing with functional causes in obtaining permanent cure. W. Verdon has suggested that œsophageal gastric spasm may sometimes be the exciting cause of angina pectoris; the present author agrees with this, and believes also that angina pectoris may be the cause of the latter condition. Treatment includes the administration of 15 grains of sodium bicarbonate, or more, in half a pint of water, one hour before each meal, to lessen acidity and flush out the stomach contents. A mild laxative is usually required, and attention should be paid to the diet. Strontium bromide and tincture of belladonna have also been found useful.

313. Dieting in Diabetes.

W. D. SANSUM, N. R. BLATHERWICK, and RUTH BOWDEN (*Journ. Amer. Med. Assoc.*, January 16th, 1926, p. 178) have been increasing the amounts of carbohydrate in the diet of diabetic patients, and have obtained good results by giving white bread, potatoes, milk, and fruit, only excluding sugar as a rule. Whereas their former diet contained, in addition to adequate protein, as much as 2 to 2.5 grams of fat to each gram of carbohydrate, the new diet contained 2 or more grams of carbohydrate to each gram of fat. The consequent increase in insulin was not found to add appreciably to the cost of treatment, since the expense of the diet was reduced. Striking improvement in the physical and mental activity of the patients was observed, and there was no trace of the acetone type of acidosis. The patients lost their craving for forbidden foods, and a somewhat lower calorie intake was apparently adequate. Such a diet has been used in the treatment of more than 150 patients, and at no time did any patient pass sugar in the urine, or signs of hypoglycæmia appear. In the milder cases improvement was noted in a few weeks after a change in diet, but in those who had been on the old diet for many years the change occurred more gradually over a period of three to four months.

314. Chronic Ulcerative Colitis.

J. A. BARGEN and A. H. LOGAN (*Arch. Intern. Med.*, December 15th, 1925, p. 818) have isolated in 88 per cent. of a series of cases of chronic ulcerative colitis a Gram-positive lancet-shaped diplococcus, growing in pairs or fours and occasionally with a capsule. It resembles Fränkel's pneumococcus morphologically, but is not bile-soluble and it does not ferment insulin, though it ferments dextrose, lactose, saccharose, maltose, raffinose, salicin, and acidified milk. The diagnostic serums of the pneumococcal types I, II, and III failed to agglutinate a number of typical strains of this organism. On blood agar the diplococcus is haemolytic (alpha) and six strains have shown cross-agglutination. The organism has been obtained in pure culture from the early lesions of ulcerative colitis, from the depths of chronic ulcers, and from distant foci elsewhere in the body. When injected intravenously into rabbits and dogs lesions were produced, especially in the dog, where the ulceration was more chronic in nature and resembled the morbid appearances found in human cases. The authors consider that the finding of this diplococcus in distant foci and the production of acute lesions in the colon account for the repeated exacerbations of the disease and the pathological picture of layer upon layer of chronic inflammatory tissue displacing the mucosa of the colon. They suggest that the treatment of chronic colitis with ulceration should consist of (1) removal of distant foci of infection, (2) the use of vaccines or other methods of immunization against the disease, (3) local applications and irrigations, (4) the empiric use of iodine in the form of the tincture, which was found valuable by them, (5) the administration of a substance like kaolin by the mouth, (6) a non-irritating but general diet.

315. The Past History in Late Congenital Syphilis.

Y. CHATENET (*Thèse de Paris*, 1925, No. 492) investigated the past history of 75 children, aged from 2 to 15 years, who had been brought to the out-patient department at the Hôpital Trousseau, Paris, for late manifestations of hereditary syphilis. In only 12 was there no history of symptoms suggestive of syphilis in early infancy. In the remaining 63, or in 84 per cent., there was a suggestive history, such as frequent abortions and premature confinements, a high infantile mortality in the same family, hydramnios and placental lesions, melaena neonatorum, convulsions, delayed physical and mental growth, early rickets and craniotabes, convergent strabismus, hypertrophy of the thymus, irreducible unilateral hydrocele, icterus, and Sisto's sign. There was hardly ever a history of an eruption or of obvious signs of congenital syphilis, but the disease assumed the form of ordinary morbid states, such as nervous or digestive troubles, and it was only the association of several of the probable signs enumerated above that indicated the presence of syphilis. Chatenet comes to the conclusion that the discovery of such probable signs in an infant is a bar to suckling by a hired wet-nurse and is an indication for immediate and prolonged treatment of the child without taking any notice of a negative Wassermann reaction.

Surgery.

316. Partial Resection of the Upper Jaw in Malignant Disease of the Nasal Fossa and Sinuses.

S. CITELLI (*Arch. Ital. di Otol., Rinol. e Laringol.*, December, 1925, p. 795) describes a method of resection of the supero-internal portion of the upper jaw in which the essential step is the removal of the ascending process and the neighbouring supero-internal region of the body of the maxilla, as far out as the infraorbital foramen. Portions of the nasal and ethmoid bones are resected to meet the requirements of the case. The incision begins at the supero-internal angle of the orbit and follows the margin of the nose till it ends below the nostril of the same side. A second incision passes horizontally outwards from this at the lower border of the orbit. The bone is then cut through along a line from the lower border of the pyriform fossa to the infraorbital foramen and the whole of the ascending process removed. The aperture can be easily extended by removing the anterior surface of the maxilla or the floor of the frontal sinus, and it gives very liberal access to the nasal passages. This method of approach is used chiefly in tumours of the nasal fossæ and the accessory sinuses. Malignant tumours are not often brought to notice in their early stages and are difficult of diagnosis. By the time they are usually seen they have a wide area of attachment and a very liberal supply of blood and lymphatic vessels. It is then often found that a tumour presenting in the nasal fossa has invaded various of the sinuses, chiefly the frontal and sphenoidal, and may have penetrated the orbit or the naso-pharynx. The ethmoid is much less often involved secondarily than primarily, tumour formation usually starting in it and extending into the sinuses. Opacity to transillumination or to *x* rays in the accessory sinuses does not always indicate malignant extension, but is often a sign of purulent sinusitis only. Citelli's method is applicable to malignant tumours arising in the nasal fossæ, accessory sinuses, or in the naso-pharynx. Tumours limited to the anterior portion of the septum or the floor of the nasal fossa can be treated by a much less radical operation. For tumour of the alveolar margin of the maxilla only the lower part of the maxilla is removed and any extension of disease can then be followed up. Except when dealing with a generalized osteosarcoma of the upper maxilla the author does not employ the classical operation of excision of the

bone, but performs the operation described. Moore, Liébault, and Canuyt have described a somewhat similar operation in which a vertical cut is made in the nasal bone, close to the septum; a horizontal cut is made outwards from the anterior naris in the anterior surface of the maxilla; this latter is joined to the orbital margin by a vertical cut immediately internal to the infraorbital foramen. The cut in the nasal bone is joined to the orbit by a horizontal incision and the large surface of bone thus freed is separated from its attachment to the floor of the orbit and removed.

317. Traumatic Adhesion of the Alar Ligaments to the Femur.

N. GRZYWA (*Zentralbl. f. Chir.*, January 23rd, 1926, p. 198) states that this pathological condition of the knee-joint has not been described hitherto. He reports the case of a soldier who injured his right knee, was confined to bed for a week, and afterwards treated on ordinary lines. He returned to duty, and eighteen months later on a long march he was seized with severe pain in the joint which prevented complete extension or flexion. There was no history of venereal disease. The joint was inflated with oxygen, and a skiagram showed no abnormality other than a distinct shadow, broader than normal, of the alar ligament, which entered the intercondylar fossa. The knee condition remained unchanged, and a month later Grzywa opened the joint, by Payr's method, under local anaesthesia. The alar ligament, greatly thickened, formed a dense band, adherent to the upper part of the intercondylar fossa, and covering the crucial ligaments with a red membrane resembling pannus. The band was resected and the subjacent structures were found to be normal. Complete recovery followed.

318. Pre-operative Treatment in Exophthalmic Goitre.

R. S. DINSMORE (*Surg., Gynecol. and Obstet.*, February, 1926, p. 177) discusses the methods which may be adopted for protection of the patient suffering from hyperthyroidism upon whom operation is to be performed. He points out that the conditions contributing to the risk are marked loss of weight within a short period of time, instability of the nervous system, myocardial changes, dehydration, and impending acidosis. The first and second are treated by absolute rest in bed and the administration of sedatives. The cardiac condition with the possibility of auricular fibrillation is countered by giving 30 minims of the tincture of digitalis every four hours for twenty-four hours. The dehydration and impending acidosis, with the attendant diarrhoea and vomiting, are treated by the subcutaneous administration of normal saline solution to which novocain has been added. In the treatment of the delirium which sometimes develops in the course of acute hyperthyroidism Dinsmore has had good results from the transfusion of whole blood. He considers that the best time to perform an operation is on the twelfth day after the commencement of the administration of Lugol's solution for the first time, since in uncomplicated cases the maximum improvement is noted on the eighth day of this treatment, and it is extremely difficult to produce the same condition with successive courses of treatment. Reactions have followed operations undertaken during the period of maximum benefit. For the treatment of post-operative tetany he recommends one or two intramuscular injections of 1 c.cm. of a parathyroid extract prepared by Collip's method.

319. Subperiosteal Fractures with Persistent Displacement of Fragments.

E. MÜLLER (*Zentralbl. f. Chir.*, January 30th, 1926, p. 258) describes twelve cases of subperiosteal fracture of the radius and ulna in children and a similar fracture in a man aged 38. The children's ages ranged from 2 to 15 years. In all these cases skiagrams taken after treatment of the fractures by plaster bandages showed persistent displacement of the fragments. On cutting down to the periosteum at the site of the fractures it was invariably found that the periosteum was intact, and that there was no extravasation of blood in the overlying soft tissues. On incising the periosteum Müller found fluid blood and clots which had apparently prevented reposition of the fragments, since after removal of the clots replacement of the bony fragments was easy. The author also describes the case of a boy aged 8 who sustained a fracture of the left humerus in the middle third of the shaft, with angular displacement. Reduction was effected under an anaesthetic, but a subsequent skiagram showed that the angular displacement had been converted into one of the usual longitudinal type. Müller made an incision over the site of the injury and found a subperiosteal fracture of the humerus. He recommends incision of the periosteum and evacuation of the blood and clots in all cases in which a skiagram shows persistent bony displacement after the application of splints or plaster bandages.

Therapeutics.

320. Insulin in Surgery.

F. N. G. STARR and A. G. FLETCHER (*Surg., Gynecol. and Obstet.*, February, 1926, p. 194) draw attention to the various ways in which insulin administration is of especial value in surgery and obstetrics. By giving insulin any diet may be prescribed to strengthen a debilitated patient—a point to be remembered in preparing for operation subjects of chronic cardio-vascular disease. Excess of carbohydrate may be given under these conditions, with some apparent protective action on the liver during the course of the anaesthetic and operation. The authors recommend that 20 to 40 grams of glucose or other carbohydrate and 15 units of insulin should be administered three or four hours before the operation. Post-operative treatment should aim at anticipating metabolic disturbances so far as possible, and therefore small doses of insulin, such as 10 units three times a day, may be given as a routine as soon as food is taken. The dose should be based upon the determination of urinary sugar, and, when possible, upon the blood sugar. In major operations some degree of hyperglycaemia is unavoidable, but insulin should be increased in an attempt to control the rising blood sugar level. Ketosis may develop rapidly after an operation, and steps must be taken to re-establish adequate utilization of carbohydrates when there is hyperglycaemia and glycosuria. Increased doses of insulin may suffice for this purpose, but otherwise additional carbohydrates must be supplied. Post-operative nausea and vomiting may occur, aggravated by the ketone intoxication, and marked dehydration may set in. It may be necessary, therefore, to administer the glucose and fluid intravenously, giving 500 c.cm. of a 5 per cent. solution as often as required. In the event of infection or severe toxaemia, the insulin value may be much lowered and the patient require 50 units or more four times a day. Under such conditions the insulin administration must be pushed until it is effective in lowering the blood sugar level. Although insulin has been advocated in the pernicious vomiting of pregnancy the authors doubt its value, since it now appears that the ketonuria is the result of dehydration.

321. Ultra-violet Rays in Asthma.

P. DUHEM (*Paris Méd.*, February 20th, 1926, p. 190) reports the treatment of 33 cases of infantile asthma with ultra-violet rays during the last year and a half. Complete cure resulted in 17 cases which had previously appeared to be hopeless, 6 were markedly improved, 4 were definitely benefited, in 4 cases no change was produced, and in 2 cases the treatment had to be terminated prematurely owing to return of the symptoms. Duhem considers that the treatment should not be prolonged or intensive, and that intervals without treatment should be interspersed. He starts with an exposure of two minutes, the quartz lamp being placed at a distance of 60 cm., and increases the subsequent exposures by two minutes up to a final total of six minutes. The lamp is brought nearer by 5 cm. at each exposure, until a distance of 45 cm. is reached. Duhem draws attention to the production of ozone by the quartz lamp with irritant effects on the bronchi and the lungs. He therefore emphasizes the need of caution in treating asthma in this way.

322. Stovarsol and Tréparsol in Congenital Syphilis.

R. DUPÉRIÉ, FAVREAU, and CAUTORNÉ (*Gaz. Hebdom. des Sci. Méd. de Bordeaux*, January 31st, 1926, p. 67) report four cases of congenital syphilis treated orally with stovarsol and tréparsol in the form of their soluble alkaline salts. Their toxicity is said to be weak. An infant, aged 2 months, was given stovarsol in daily doses of 0.12 cg. four days a week to a total of 6.6 grams. The treatment was well borne and a marked improvement in the weight followed. All muco-cutaneous lesions disappeared, but enlargement of the spleen and liver persisted until mercurial inunction was also employed. There was some craniotabes and rickets—the child was artificially fed—which were treated with ultra-violet radiation. Ten months after treatment the Wassermann reaction of the blood was negative, but four months later it was weakly positive. An infant, aged 3 months, was given daily doses of 0.05 cg. of tréparsol four days a week, followed by three days of rest, with mercurial inunction. The drug was well tolerated. After two months of treatment all muco-cutaneous lesions had disappeared and also a sero-haemorrhagic coryza; the weight increased by nearly 1½ lb. in less than a month. The spleen and liver remained large, but three months later the liver was found to have diminished considerably. The treatment was interrupted for a month and then resumed, till in ten months the infant had had about 6 grams of tréparsol. The general condition then was very good and the Wassermann reaction of the blood was negative. Similar results were obtained in the other two

cases, the initial daily doses of tréparsol having been 0.025 and 0.05 cg., and the principle of four successive days' treatment a week with three days' rest being observed. When about 3 grams had been administered there was remission of treatment for a month; then it was resumed till a total of 3.5 to 4 grams had been taken. Symptoms of intolerance were observed in one case—vomiting, colic, and diarrhoea. The dose was lessened during these attacks. Marked general improvement and apparent cure are reported in both cases.

323. The Treatment of Latent Congenital Syphilis.

WHEN an infant presents only signs of presumptive or probable syphilis, without any evidence of active disease, M. LUST (*Le Scalpel*, January 30th, 1926, p. 112) states that mercurial inunction gives excellent results and is all that is necessary. He recommends that the periods of treatment be spaced so as to allow of breaks of twelve days to two months. The mother, however, is apt to interrupt the treatment on the first signs of improvement, as inunction takes time and is messy. He then falls back on the neutral mercury lactate in a solution of 1 in 1,000, the dose being spread over three feeds daily. He quotes Marfan's dosage—namely, up to 3 months, 12 drops per kilogram of body weight; from 3 months to 3 years, 10 drops per kilogram of body weight. It is given fifteen, ten, and seven days a month respectively during the first, second, and third years. It should be intermitted when there is diarrhoea, but if diarrhoea recurs each time the drug is administered recourse should be had to inunctions of mercury.

324. Local Vaccine Treatment of Chancroid.

J. HABABOU-SALA (*Thèse de Paris*, 1925, No. 508), who records seven illustrative cases, employs a specific anti-Ducrey vaccine filtrate for the local treatment of chancroid. Filtration is necessary, as the presence of micro-organisms would cause an intense local reaction. If the bubo has not been opened, as much pus as possible is evacuated by puncture, and then the vaccine filtrate is injected. Cotton-wool or gauze soaked with the filtrate is then applied as a dressing. Open buboes are treated in a similar way. The soft chancre itself is first cleaned with sterile water and then dressed with cotton-wool or gauze soaked in the vaccine filtrate. The dressing is renewed every day, and no other treatment is employed. The vaccine filtrate acts with remarkable rapidity. Within the first twenty-four hours the pain disappears, the pus becomes serous, and by the fourth day the bubo may be regarded as healed.

Laryngology and Otology.

325. Trigeminal Lesions in Mastoiditis.

H. ALOIN (*Rev. de Laryngol., d'Otol. et de Rhinol.*, December 31st, 1925, p. 805) describes certain cases of mastoiditis which are followed by crises which on superficial examination may be mistaken for meningeal symptoms. He mentions two cases, in girls aged 7 and 8 respectively, who suffered from acute otitis media for which paracentesis had been performed; in neither case did this prove sufficient and cortical mastoid operations were performed. In one girl a second and much more extensive operation was required before the inflammatory processes were sufficiently dealt with. In both cases the operations were followed, at some little interval, by crises of great pain, which was referred to the distribution of the inferior maxillary nerve and was associated with a functional inability to open the mouth. These attacks were very severe and continued at the rate of two or more a day for a period of several weeks. The wound showed very little tendency to heal for some time and then repair was very slow. The skin of the scalp was very unhealthy, and in one case a "bedsore" formed over the occipital protuberance. The period between the attacks was entirely free from pain or discomfort, but complete recovery from the attacks had not been attained after more than a year, though they were now slight and infrequent. The author considers that the explanation of these phenomena lies in the fact that the petrous bone is affected by an osteomyelitis which is comparable to that in the long bones. The two petrous bones are affected successively but to an equal extent. All the structures around the apex of the petrous bone are affected and there may be some transient meningeal symptoms. Various cranial nerves may be affected, but the most common is the trigeminal, and of its branches the inferior is more often involved than the others. This may be due to the very close proximity of this division of the nerve to the bone, and it also explains the fact that the motor division is affected equally with the sensory, causing the inability to open the mouth. The anterior portion of the petrous bone is much more cancellous than the posterior, and is affected to a much greater extent than the posterior. The author has traced the progress of tuberculous disease from the middle ear by an osteomyelitis of the petrous bone to the meninges, and he thinks that, when there is evidence of petrous involvement, the possibility of infection by the tubercle bacillus must not be lost sight of. Treatment should consist of a very early and vigorous exenteration of the diseased bone, and, given this, there is a fairly good prognosis. The author remarks that the surgeon must guard against being persuaded into further extensive operations at the time when the crises of pain are causing great anxiety.

326. Leptomeningitis due to Nasal Furuncle.

A. LOGAN TURNER and F. ESMOND REYNOLDS (*Journ. of Laryngol. and Otol.*, February, 1926, p. 73) describe the case of a male patient in a mental hospital who developed a boil on the right nostril which burst forty-eight hours later with much purulent discharge. The condition improved, but three days after the onset the patient complained of headache and the following day he vomited. By the fifth day the eyeballs were prominent and vision was dimmed; there was very marked conjunctival chemosis, and the eyeballs became immobile. On the sixth day the temperature, which had been 102°, rose to 106°; the patient was unconscious and died that day. At the necropsy a diffuse leptomeningitis was found and the cavernous sinuses were filled with septic blood clots. A large block of the base of the skull and the orbits was removed and serial sections were cut. It was found that practically all the veins of both orbits were filled with septic clot; the walls of the veins had necrosed, and pus had formed around them. The authors describe at length the anatomical arrangement of the venous channels of the area. They consider that thrombosis started in a venule close to the furuncle and extended into the superior ophthalmic veins, whence an embolus was detached which passed on to the cavernous sinus. Here a septic thrombus formed and spread in a retrograde direction to the veins of both orbits, both sides of the dura mater, the middle meningeal vessels, and the spheno-parietal veins. There was no involvement, either primary or secondary, of the accessory sinuses of the nose. The particular danger associated with furuncles of the face appears to be due, in the first place, to the fact that there is a very intimate association between the skin and the muscles of the face, causing almost incessant movements of the skin and a great tendency to separate off fragments of the septic clot. Secondly, the wide communication of the ophthalmic vessels with those of the intracranial region favours the disposition of the septic clot. In the case described the diploë of the bone was severely infected, its vessels being thrombosed and surrounded by pus. The optic nerve showed purulent infiltration of the subarachnoid space and the pial membrane of that nerve.

327. The Effect of Electric Shocks on the Auditory Apparatus.

U. CALAMIDA (*Arch. Ital. di Otol., Rinol. e Laringol.*, December, 1925, p. 805) records three cases in which he was able to examine the ears of patients who had been struck by lightning or powerful electric charges. In the first a sentry was struck by lightning; the right ear was not injured, but the left ear showed a small perforation of the drum with injection and thickening. Weber's and Rinne's tests indicated a middle-ear deafness, and examination of the posterior labyrinth showed no change. The second case was that of an electrician who was struck by a spark from a current of about 2,000 volts in the region of the right ear. There was some excoriation of the pinna and the drumhead was slightly reddened. Tests of hearing showed a marked internal ear deafness, tuning-forks and the Edelmann-Galton whistle being unheard. Tests of the posterior labyrinth showed a decreased excitability of the semicircular canals but a normal reaction of the otoliths. There was oscillation of the head towards the right; the nervous system showed signs of involvement—namely, uncertainty of movements and thoughts. The third case was also an electrician, who was struck by a current of 13,000 volts. He suffered from a severe bilateral deafness which was shown to be due to lesion of the apparatus of transmission and not of perception. The labyrinth was normal to rotation but hypoexcitable to caloric tests, and the otolith function was normal. Ten years after the accident this patient had markedly retracted but mobile drumheads and still very severe deafness. In these cases it is comparatively rare for the middle ear to be affected to the exclusion of the internal ear, and of the labyrinth it is usually the anterior or cochlear portion that is damaged, and the posterior escapes. This portion is, however, affected in some cases, and there is occasionally a central lesion which gives rise to symptoms such as incoordination and oscillation of the head, as described in the second case. It is thought that previous catarrhal changes in the middle ear predispose this part of the organ to injury.

Obstetrics and Gynaecology.

328. Forceps Delivery in Persistent Occipito-posterior Presentations.

H. C. WILLIAMSON (*Amer. Journ. Obstet. and Gynecol.*, January, 1926, p. 37) describes a method of terminating labour in a persistent occipito-posterior presentation: he combines manual rotation of the head to a transverse position with forceps application, the posterior blade in the hollow of the sacrum and the anterior blade under the symphysis. The blades thus face the occiput, so that a second application is unnecessary. In a right presentation the left hand is used to rotate and hold the head, the right hand being similarly employed in a left presentation. The hand is cupped so that the fingers are posterior to the head, with the occiput lying in the palm. Firm pressure may be made with the other hand upon the fundus, thus forcing rotation; by this manœuvre flexion is secured and the head retained in the pelvis. In a right occipito-posterior position the right blade of the forceps is applied posteriorly, and should be introduced first without withdrawing the hand which has been passed into the uterus. The blade is passed in the mid-line and the handle depressed to avoid the promontory. The hand may now be withdrawn, since the first blade will hold the head in a transverse position; the second blade is then introduced along the side of the pelvis and rotated into position, its placing being facilitated by depressing the handle. Since the right blade was introduced first it will be necessary to cross the handles before they can be locked. In a left occipito-posterior presentation the left blade is introduced first, and the technique is similar to that described for the right occipito-posterior presentation, except that the handles do not have to be crossed. In many cases when the forceps is locked the head instantly rotates to the anterior position, but in cases in which this does not occur only slight rotation is necessary. Rotation must be completed before traction is made, so as to avoid damage to the soft tissues. Williamson reports 100 mid and high forceps cases treated successfully by this procedure.

329. Dangers of Pubiotomy.

NIEDERMEYER (*Zentralbl. f. Gynäk.*, January 23rd, 1926, p. 221) records two cases of pubiotomy in multiparae which were followed respectively by urinary fistula and by a large hernia in the labium majus at the site of rupture of a traumatic vesical fistula. Among other dangers of the operation are bleeding from the cavernous tissue or bone, infection of a haematoma, and injuries of the soft parts leading to prolapse; the formation of a pseudarthrosis and difficulty in walking have also been not very rare sequels. Although believing that pubiotomy is probably preferable to symphysiotomy, Niedermeyer is inclined with increasing experience to limit still further the therapeutic scope of operations on the bony pelvis. He thinks that these are to be regarded as an alternative to perforation rather than to Caesarean section, and are absolutely contraindicated where (1) the true conjugate is less than 7 cm., (2) infection or fever is present or the liquor amnii has drained away, or (3) the foetus is dead. He adds that it is also inadvisable to perform pubiotomy in primiparae, or when the conjugate, although exceeding 7 cm., is less than 8 cm.

330. Retroposition of the Uterus.

J. F. MCGRATH (*Surg., Gynecol. and Obstet.*, February, 1926, p. 241) discusses the incidence, symptomatology, prevention, and treatment of retroposition of the uterus. He believes that retroposition *per se* does not produce symptoms and therefore does not require treatment, but where symptoms are present these are a result of associated lesions, and treatment is then called for. McGrath considers that the displacement can be the cause of the associated lesions. He distinguishes (1) a congenital type, most frequently found in young girls and nulliparous women, and (2) an acquired type which, he says, is more common than the former. He states that little can be done to prevent the congenital lesion, but suggests that careful supervision of the hygiene of the young girl at the age of puberty, combined with the occasional use of gland therapy, may lessen the incidence. Treatment of this type unless the disability is severe is unnecessary, since marriage and pregnancy usually relieve the condition. Proper preventive post-partum treatment, rapid resolution of injuries, rest in a suitable position, and, if necessary, the use of a pessary, may do much to prevent acquired retroposition. Where the condition has been present for less than a year a suitable pessary may cure it. If it has been present for a longer period conservative treatment is hardly likely to cure, but an operation will probably be successful if a pessary relieves the symptoms. Of the various methods of surgical intervention he does not recommend ventrofixation, or the operations of Olshausen and Gilliam, since by these strangulation of the intestines is possible; he prefers a modified Simpson-Montgomery technique; or, where this is not possible or suitable by reason of prolapse of both adnexa with marked varicose veins of both broad ligaments, he advises the Baldy-Webster operation.

Pathology.

331. Vaccination against Anaerobic Infections.

M. WEINBERG and J. BAROTTE (*C. R. Soc. de Biologie*, February 12th, 1926, p. 312) have attempted to immunize guinea-pigs to some of the anaerobic organisms that are likely to gain access to wounds. The vaccines used were prepared by the addition of 0.3 to 0.5 per cent. formol to a twenty-four hours' glucose broth culture, incubating for a week or a fortnight to kill the organisms, centrifuging, and suspending the deposit in 50 per cent. glycerol. Immediately before use the vaccine was made up to its original bulk with saline. One set of twenty guinea-pigs received two doses of *B. welchii* at fourteen days' interval. Two to four weeks after the second injection they were tested for immunity by the inoculation of virulent bacilli. All of them withstood one lethal dose; the control animals died the same night. Another set of twenty guinea-pigs received two injections of *B. oedematis maligni* vaccine, and forty-six days later they were injected with living bacilli. The controls died during the night; the vaccinated animals either survived or did not die for two days. A third set of guinea-pigs received two injections of a vaccine consisting of equal numbers of these two organisms. Sixty-nine days later they were injected with a mixture of living organisms of both species. The control animals died or recovered slowly after showing serious lesions; the vaccinated animals all survived, though they developed a more or less marked tumefaction of the thigh. These experiments are admittedly not conclusive because many of the vaccinated animals appear to have died from intercurrent epidemic diseases, but they do show that a certain degree of immunity can be attained as the result of the injection of formolized vaccines. The authors suggest the addition to the vaccine of *B. oedematiens*. A few experiments made on human volunteers show that the bivalent vaccine at least is well supported in doses of 5 to 10 c.cm.

332. Blood Calcium in Eclampsia.

S. M. FEINBERG and A. F. LASH (*Surg., Gynecol. and Obstet.*, February, 1926, p. 255) have made a pathological investigation of the calcium content of the blood in eclampsia to ascertain whether any etiological significance could be traced. Disturbance of the calcium metabolism has been described in infantile tetany; it is also known that during pregnancy osseous changes, such as softening of the bones and dental decay, may occur, which might be interpreted as evidence of interference with the calcium balance. The blood calcium figures of eleven cases of normal pregnancy were determined shortly before delivery, and twelve cases of pre-eclamptic and eclamptic toxaemias were examined. Although the calcium figures for eclampsia were slightly lower than those for normal pregnancy, the authors conclude that the difference is so slight as to be negligible. Moreover, in cases of uraemia, chronic nephritis, and cavernous sinus thrombosis, still lower figures were obtained. In none of the cases of eclampsia was there any evidence of a disturbed calcium metabolism as suggested by a history of delayed dentition, tetany, or rickets.

333. Inoculation of Herpes Febrilis.

P. REMLINGER and J. BAILLY (*C. R. Soc. de Biologie*, October 30th, 1925, p. 983) describe the various methods employed by them in inoculating the virus of herpes febrilis into rabbits. (1) Intraperitoneal inoculation. Two out of four animals so inoculated developed typical herpetic encephalitis. (2) Inoculation into the tongue muscles, a method which Remlinger had previously described as likely to be useful owing to the close proximity of the nerve centres and the richness of the tongue in nerves and lymphatics. Of two rabbits inoculated in this manner one remained unaffected and the other developed typical herpetic encephalitis. (3) Intratesticular inoculation. A rabbit so inoculated developed paraplegia followed by fatal ascending paralysis. Subdural inoculation of a testicular emulsion produced typical encephalitis in two other rabbits. (4) Inoculation of an emulsion of a herpetic brain into the marginal vein of the orbit caused sudden death of a rabbit ten days later, and passage produced typical encephalitis in four days. (5) Conjunctival instillations of a cerebral emulsion from a rabbit which had died of encephalitis reproduced the disease in another animal. (6) Intranasal inoculation after scarification of the mucous membrane caused progressive cachexia, and passage gave rise to typical encephalitis. (7) Nasal instillations without damage to the mucous membrane had no effect on one rabbit and caused the death of another with symptoms of encephalitis.

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

334. Protein Sensitivity.

I. M. ALLEN (*New Zealand Med. Journ.*, December, 1925, p. 286) reports a consecutive series of 65 patients suffering from such affections as asthma, urticaria, hay fever, eczema, and food idiosyncrasy; in each case some indication of protein sensitivity was detected. He states that this sensitivity is entirely responsible for hay fever and for the majority of cases of asthma, urticaria, eczema, and food idiosyncrasies. In 26 cases the sensitivity was manifest before the age of 5, and 22 patients first noticed their disability between the ages of 20 and 40. In no case was the sensitivity first observed after the age of 45. He distinguishes three types of asthma: (1) that preceded by hay fever—hay asthma; (2) that secondary to bronchitis; and (3) that due to food sensitivity. He considers hay fever, all respiratory infections, and severe respiratory infections in adults as being pre-asthmatic conditions, and stresses the need for early treatment in the pre-asthmatic stage or on the first appearance of asthmatic symptoms. He thinks that this pre-asthmatic condition should be regarded as seriously as the precancerous condition in view of the individual disablement and the economic loss. Treatment should therefore be energetic and include alleviation of symptoms, removal of the irritating substance, specific desensitization, group desensitization, and non-specific desensitization, undertaken in this order. Allen has also investigated cases of idiosyncrasy towards aspirin, and found that these patients were very sensitive to many different proteins; the symptoms in each case were rhinorrhoea, urticaria, and asthma.

335. Prophylaxis against Tuberculosis.

F. CEVEY (*Journ. Trop. Med. and Hygiene*, February 15th, 1926, p. 53) urges the necessity of a more efficient prophylaxis against tuberculosis by seeking for its earliest signs without waiting until the infection has become a disease. He points out that this can only be attained by the systematic examination of school children. At the earliest sign of undernutrition and diminished resistance, as shown by clinical symptoms, *x* rays, and von Pirquet's reaction, active immunization, followed by physical training, should be commenced. Periodical examination should follow so that treatment may be repeated if found necessary, and the spread of infection prevented by education and disinfection. By treating any accompanying tuberculous infection at the same time that the undernourishment is being corrected the gain to nutrition has been more than doubled in six classes of children under observation, and Cevey argues that a method which has been found capable in three or four months of providing for tubercle-infected children in cities a state of nutrition two and a half times greater than that found among children living in the country is deserving of attention.

336. Glandular Fever.

F. MÜNDEL and J. FRANZ (*Monatsschr. f. Kinderheilk.*, February, 1926, p. 544) report an epidemic of eight cases of glandular fever which occurred in the whooping-cough department of the children's clinic at Frankfort. The following features were common to all: (1) The patients were children aged from 2 to 3 years. (2) They were mainly children of a pasty lymphatic appearance and with active rickets. (3) A sudden onset of fever with a low degree of rhino-pharyngitis, regularly followed within twenty-four to forty-eight hours by swelling of the neck glands. (4) Absence of enlargement of the liver and spleen, which Pfeiffer regards as characteristic of glandular fever. (5) Normal blood picture. In spite of repeated examinations, there was no increase of eosinophils or relative lymphocytosis, to which Samuel attaches considerable diagnostic importance. The authors attribute the glandular enlargement to the child's lymphatic constitution and not to a bacterial infection.

337. Diphtheria following Tonsillectomy.

A. ZINGHER (*Amer. Journ. Dis. Child.*, January, 1926, p. 72) points out that diphtheria as a complication following tonsillectomy may be overlooked until too late for effective antitoxin treatment. The post-operative slough closely resembles a diphtheritic pseudo-membrane, and consequently may lead to the danger of a superimposed secondary diphtheria being unrecognized. The necessity for routine bacteriological examination of the nose and throat before operations in these regions is emphasized, unless a previous negative Schick test has been obtained; carriers so discovered may be protected by a prophylactic dose of antitoxin. Zingher gives notes of four cases occurring in children, aged from 3 to 9, in which diphtheritic faucial lesions developed immediately after tonsillectomy. The serious nature of such a superimposed diphtheria lies in the early and rapid absorption of a fatal dose of toxin from an extensive raw surface, and the difficulty in recognizing the disease in the post-operative slough until much time has been lost and the opportunity for effective antitoxin treatment has passed. If cultures are positive a prophylactic dose of 1,500 units should be given unless the patient already shows a definite negative reaction with the Schick test. Zingher recommends the active immunization of all young children with the new toxin-antitoxin mixture or with diphtheria toxoid.

338. Measles and Poliomyelitis.

D. TRONCONI (*Riv. di Clin. Ped.*, January, 1926, p. 58), imitating the method of treatment of general paralysis and encephalitis by malarial virus, exposed two children, aged 4 and 2 years respectively, after a recent attack of acute poliomyelitis, to the infection of measles. The poliomyelitis had developed five days previously in one child, in whom it had caused flaccid paralysis of the right shoulder girdle, and a week previously in the other, in whom it had produced flaccid paralysis of the lower limbs. One child developed measles in seventeen days, and the other in twenty-three. On subsidence of the fever and disappearance of the rash spontaneous movements occurred in the paralysed limbs, being at first very limited, but subsequently more extensive and energetic, until in twenty days' time one child was able to raise his shoulder girdle, and the other to perform normal flexion and extension of the limbs, which had hitherto been as lifeless as those of a puppet. Tronconi suggests that the virus of poliomyelitis was modified by the action of the measles virus, and that the neurones which had been affected but not destroyed were thereby enabled to make an anatomical and functional recovery.

Surgery.

339. Resection of the Lumbo-sacral Sympathetic in Impending Gangrene of the Leg.

Y. OSAWA and G. USAMI (*Zentralbl. f. Chir.*, February 6th, 1926, p. 326) state that the success of Leriche's and Brüning's periarterial sympathectomy induced them to resect the lumbo-sacral sympathetic trunk in a case in which ligature of the popliteal artery for aneurysm was followed by serious symptoms of impending gangrene. A workman, aged 55, with a syphilitic history and strongly positive Wassermann reaction, noticed a pulsating swelling in the left popliteal space; he was given a short course of antisyphilitic treatment. On admission to hospital six months later the swelling was found to be as large as a child's head and the overlying skin was necrotic. The internal organs were healthy, but the patient was anaemic. The left dorsalis pedis artery could not be felt. Four days later the aneurysmal sac was laid open, clots and necrotic tissue removed, and lateral suture of the artery was performed. After the operation there was distinct pulsation in the small arteries of the foot. Three days later serious secondary haemorrhage occurred and the artery was ligatured above the aneurysm. After the artery had been ligatured and an Esmarch's bandage removed there was very slight bleeding from the distal portion of the popliteal artery. Subsequently the leg became cold and pale, with diminished sensibility for more than three inches above the ankle. In the evening the skin of the limb became wrinkled and the whole foot was colder than the other. Next day the foot and calf were cyanosed and the temperature (between the toes) was two or three degrees lower than that on the right side. On the following day subumbilical laparotomy was performed under a general anaesthetic. The three lower lumbar sympathetic ganglia were exposed, the sympathetic trunk was freed from the common iliac vessels and resected together with the three upper sacral sympathetic ganglia; the posterior and anterior layers of the peritoneum were sutured and the abdomen was closed. After the operation the temperature of the left toes rose rapidly; in six hours they were two degrees above those of the right foot, and the left dorsalis pedis artery was pulsating. Cyanosis and pallor were replaced by slight reddening. Twelve hours later the posterior tibial artery was pulsating,

the wrinkled skin had become smooth, and sensation was normal; the necrotic area in the popliteal space showed a line of demarcation and free granulation. No bladder complication occurred, and the patient made a good recovery.

340. Diagnosis of Lateral Sinus Infection.

G. L. TOBEY (*Boston Med. and Surg. Journ.*, January 14th, 1926, p. 53) describes means of detecting lateral sinus thrombosis, and states that, when there is evident sepsis during the course of an aural infection, failure to localize the seat of infection is an indication for ligature of the jugular vein and exploration of the lateral sinus. When thrombosis with complete or incomplete obliteration of the sinus is present it may be demonstrated by observations on the pressure of the cerebro-spinal fluid. His method of conducting this test is as follows. With the patient in the lateral position a lumbar puncture is made and the fluid allowed to run into a glass manometer of 2 mm. bore. The initial pressure is noted, as also are the variations due to the pulse and respiration. Without disturbing the patient pressure is applied to the normal side of the neck between the larynx and the sterno-cleido-mastoid muscle until a strong carotid pulsation is felt. During the compression the height of the column in the manometer rises, to fall again when the pressure is released. This is repeated on the opposite side and then on both sides simultaneously. When lateral sinus thrombosis is present there is no rise, or only a slight rise, when the abnormal side is compressed, and pressure on both sides gives approximately the same reading as when the normal side only is pressed. Tobey has found this test of great value in cases of double mastoiditis with symptoms of lateral sinus thrombosis. He admits the possibility of two dangers: (1) sudden death, from the presence of subtentorial abscess or tumour, following the lumbar puncture; (2) the precipitation of acute meningitis due to the liberation of organisms from an area of localized infection or from the blood stream. The first may be almost excluded by not performing the test where there is a possibility of these conditions existing. The latter he considers hardly likely to occur, and in a series of eighty-four cases he has not had evidence of ill effects resulting from the use of this test.

341. Etiology of Surgical Tuberculosis.

H. KELLER (*Med. Journ. and Record*, February 3rd, 1926, p. 169), who reports a series of 46 cases of joint tuberculosis, states that tuberculous infection in childhood is responsible for the majority of tuberculosis in all ages; it is therefore important to trace the seat of the primary infection. Bone and joint tuberculosis generally arises from a primary focus elsewhere in the body, and this is most often found in the lymph nodes lying in the mediastinum. This statement, he says, is very well substantiated by *x*-ray photographs and *post-mortem* findings, and therefore an *x*-ray examination of the chest should always be made when there is tuberculous disease of the bones or joints. Moreover, treatment directed solely towards cure of the joint infection is only palliative, and attempts should be made to eradicate the primary focus. For this purpose radiation of the chest should be employed in those cases where enlarged lymph nodes are present in the mediastinum, as by this means the lymphoid cells are destroyed and replaced by fibrous tissue, thus simulating Nature's method of combating tuberculosis. Keller has examined the tonsils in forty children treated for joint tuberculosis, and found them infected in thirty-two cases. Therefore, he adds, the tonsils should always be removed when they are suspected, and further, small buried sclerosed tonsils are often a greater danger than those of normal size, since they may increase the facility for infection because of the wider openings of the crypts and atrophy of the lymphatic tissue.

342. Congenital Displacement of the Scapula.

R. D. SCHROCK (*Journ. of Bone and Joint Surgery*, January, 1926, p. 207) points out that at the ninth week of foetal life the scapula begins to descend from the neck to the thorax. Failure in descent may be due to maldevelopment in bone, cartilage, and muscle, or the movement may be interrupted by abnormal pressure in the uterus. There is still much doubt about the exact cause of this congenital deformity, and its treatment appears on the whole to have been discouraging in the past. In cases where a chondro-osseous bridge was present a simple resection was advised; if the muscles were shortened myotomies were performed. Schrock has obtained far more satisfactory results by a more radical procedure; this consists of radical subperiosteal transplantation of the scapula with osteotomy of the base of the acromion process. After exposure of the scapula the muscles are removed by subperiosteal elevation. Where a chondro-osseous bridge passes from the vertebrae to the upper border of the scapula this is removed freely. If the shoulder cannot then be brought back, an osteotomy of the base of the acromion is performed; this gives an appreciable downward drop of the shoulder. The lower angle of the scapula is then anchored to the lowermost rib and the muscles are sutured in anatomical layers. This procedure was adopted in two cases with good results, and full details and photographs are given to explain the technique of the operation.

Therapeutics.

343. Prophylactic and Curative Value of Pertussis Vaccine.

HÉLÈNE M. BROUWER-FROMMANN (*Nederl. Tijdschr. v. Geneesk.*, January 9th, 1926, p. 142), owing to an outbreak of whooping-cough in a children's home, employed pertussis vaccine in 38 cases. The children, whose ages ranged from 2 months to 3 years, were given subcutaneous injections in doses from 750 million to 3,000 million bacilli. The results were as follows: (1) All the 38 children contracted the disease. (2) The endemic ran a very mild course. The number of the paroxysms was not very great and the paroxysms themselves were not very violent in character. (3) Sudden cessation of the paroxysms after injection of the vaccine did not occur. (4) No complication developed and there was little loss of weight, but rather the reverse. (5) In patients aged from 18 months to 3 years the disease was over in four weeks' time; in children aged from 6 to 18 months it lasted somewhat longer; and in younger children still it lasted six weeks or more. The author's experience thus differs from that of Freeman, Luttinger, Marinucci, Galli, Auricchio, and von Bokay, who obtained good results from prophylactic injection of pertussis vaccine.

344. W. F. ENKLAAR (ibid., January 23rd, 1926, p. 349) treated a hundred cases of whooping-cough in children aged from 0 to 12 years with Bordet-Gengou vaccine, and obtained good results in all but four, in whom the disease was not affected by treatment. The first requirement of a pertussis vaccine is that it should be absolutely pure and contain virulent pertussis bacilli. As a general rule three injections are sufficient, the dosage on each occasion being 3,000 million bacilli. The patients usually showed little or no rise of temperature after injection, unlike what happens after injection of other vaccines, especially antipneumococcal, when a temperature of 104° is frequently observed. No bad effects were noted. The injections were given intramuscularly every other day. Improvement occurred sometimes after the first injection, often after the second, and after the third at latest, and consisted in the cough becoming loose and less frequent, so that the disease could be regarded as cured in nine to ten days. In infants the improvement was shown by disappearance of the almost pathognomonic facial pallor. Pulmonary complications were rarer and milder than usual, and suppurative otitis cleared up completely after paracentesis. Lastly, the good effect of the vaccine treatment was shown by the mortality among the hundred cases being *nil*. Enklaar concludes that pertussis vaccine is a remedy of great value.

345. Insulin in Exophthalmic Goitre.

O. KLEIN (*Med. Klin.*, February 12th, 1926, p. 248) states that encouraging results have been reported from the treatment of exophthalmic goitre by insulin. The improvement was shown by gain in weight and the relief of tachycardia, mental disturbances, and tremor, as well as by a general improvement in the patients' condition. Klein has had three cases of similar improvement. He suggests that there are several forms of exophthalmic goitre and that insulin is useful only in the pancreatogenous type, but fails in cases of thyroid origin and in those due to primary hypophyseal disease. He adds that confirmation of this view has been provided by other Austrian and German investigators.

346. Treatment of Parkinsonism by Stramonium.

E. JUSTER and R. HUERRE (*Bull. Soc. de Thér.*, January 13th, 1926, p. 11) have treated several cases of Parkinsonism, both of the post-encephalitic variety and paralysis agitans, by stramonium in pills or cachets in progressively increasing doses of 0.05 or 0.10 gram, which were given preferably during meals. They always tried to reach the maximum limit of tolerance, being guided by the following symptoms of intolerance: pain in the stomach, dryness of the mouth, and mydriasis sufficient to interfere with reading. The improvement was most marked in the rigidity, while accessory symptoms, such as salivation, sweating, insomnia, emotionalism, and anxiety, were much attenuated. On the other hand, the tremor was little affected. The action of stramonium on the rigidity was undoubtedly due to the

alkaloids contained in stramonium—namely, atropine and hyoscyamine. Treatment of Parkinsonism by stramonium is merely symptomatic, but in the absence of etiological therapy it is one of the most successful, least toxic, and simplest measures. In order to prevent habituation to the drug the authors administer it for periods of twenty days, followed by an interval of ten days, or alternate it with other drugs, such as arsenical compounds or derivatives of malonylurea or hemlock seeds.

347. Intravenous Injection of Camphor.

G. HOSEMANN (*Zentralbl. f. Chir.*, February 13th, 1926, p. 394) states that he has used camphor injections in over a thousand cases during the last ten years and that the method has also been well tested by a number of leading surgeons. Schröder (Kiel) reports that he has recently abandoned the transfusion of large quantities of blood, as he considers that the intravenous injection of camphor is preferable. Hosemann's solution had the following formula: "Spiritus camphoratus" 3.5 parts, alcohol 2 parts, and sterile distilled water 4.5 parts. The results are said to be more certain than those produced by the injection of sodium chloride, and normal saline, or glucose solutions. This injection of camphor into the blood stream is stated to have remarkable results in cases of severe haemorrhage and of circulatory failure, whether due to shock or to septic absorption. A patient had had intestinal obstruction for several days; he was pulseless, with cold blue extremities, but after the above treatment he rallied sufficiently to enable laparotomy to be performed. In twelve cases of paralytic ileus, following suppurative appendicitis and peritonitis, the patients' lives were saved by injections of camphor-glucose solutions, and Heidenhain's ileal fistula. The patients rally immediately after the injection and experience a sensation of warmth and of returning strength.

Radiology.

348. Aplastic Anaemia due to X Rays.

J. LANKHOUT (*Nederl. Tijdschr. v. Geneesk.*, December 19th, 1925, p. 2789), who records an illustrative case, states that it is generally known that *x* rays and radium may cause changes in the blood. Mottram and Clarke (1920) have shown that persons who employ radium for therapeutic purposes may present leucopenia at the end of a fortnight. Mottram (1920) has emphasized the importance of early blood examination in radiologists. Not only did he find in many cases a diminution of the red corpuscles and a high colour index, but he also observed three fatal cases, and Larkins recorded another. In all these cases the disease ran a rapid course, death occurring in a few months. Amundsen (1924) found that the blood in radiologists always differed from the normal. The total number of red corpuscles was often unusually low. The change in the blood picture, however, was most marked in the relation of the polymorphonuclears to the lymphocytes. The haemoglobin value was usually normal. The effect of radiological work on the blood becomes distinct after one or two months, and may be observed even in the servants attached to a radium institute. The new Coolidge tube is particularly dangerous owing to the remarkably penetrative power of its rays. Lankhout's case was that of a medical practitioner, aged 34, who was director of an *x*-ray institute, and had been working without any protection against deeply penetrating rays. When he was first seen by Lankhout he was moribund, but he gave a history of weakness, shortness of breath, and pallor of some months' duration. Examination of the blood gave the following results: Haemoglobin 13 per cent. (Sahli), colour index 1.3, red cells 610,000, leucocytes 900, 52 per cent. of which were polymorphonuclears and 48 per cent. mononuclears. The red cells showed anisocytosis, poikilocytosis, polychromatophilia, basophil stippling, and nucleated forms.

349. Radiological Diagnosis of Gastric Syphilis.

L. T. LEWALD (*Radiology*, February, 1926, p. 138) maintains that a radiological examination affords the best means of recognizing the existence of syphilis of the stomach, and reports cases with radiograms in illustration. He considers that the characteristic evidence so obtained is as follows. The stomach in syphilis may appear to be diminished in size, and there is always immediate evacuation of most of the stomach contents; compensatory dilatation of the oesophagus is often present. In other cases there may be a fairly symmetrical deformity involving the middle of the stomach and producing a dumbbell-like appearance. When this is found in a young patient or in an older one, without cachexia commensurate with a malignant involvement of the stomach of this extent, syphilis should always be suspected. Some cases show a remarkably small and tubular stomach; this is far more difficult to distinguish from carcinoma. In another class the *x*-ray appearances resemble those of carcinoma, there being localized infiltrated areas of the stomach wall. When the syphilitic lesion is situated at the pylorus, producing stenosis and gastric retention, it is always more extensive than the lesion in simple ulcer and may be as marked as in gastric carcinoma. The warning is given that, though a positive Wassermann reaction does not necessarily prove the specific nature of a stomach lesion, yet, on the other hand, a negative Wassermann reaction does not exclude it. In doubtful cases antisyphilitic treatment under radiological supervision should always be employed in cases where there is any doubt as to the diagnosis, or where malignancy is believed to be present and so advanced as to render operation impracticable. A case is cited of syphilitic perforation causing death, no treatment being given, owing to an erroneous diagnosis of advanced malignancy.

350. X Rays in the Diagnosis of Intestinal Tuberculosis.

N. H. BLAKIE and A. T. LAIRD (*Minnesota Med.*, February, 1926, p. 66) believe that with the aid of *x* rays it is possible to diagnose tuberculous ulceration of the colon near the caecum much earlier than formerly. They consider that every case of pulmonary tuberculosis should be examined with the aid of a barium test meal or enema to demonstrate such evidence of tuberculosis as the too rapid passage of the meal through the inflamed areas (Stierlin's phenomenon). In tuberculous enteritis the barium passes rapidly through the large bowel, evacuation often being completed within twenty-four hours; the caecum and lower colon appear to pass the meal along as soon as it is received. The usual haustral sacculations are lacking and the affected portions are only partially filled, presenting a ragged and irregular appearance. Occasionally the barium is delayed at the ileocaecal valve from spasm (ileal stasis), and these pictures of hypermotility, filling defects, and ileal stasis are regarded as characteristic of ulceration of the caecum and ascending colon.

351. X Rays in Carcinoma of the Breast.

B. J. LEE and N. E. TANNENBAUM (*Journ. Amer. Med. Assoc.*, January 23rd, 1926, p. 250) record 363 cases of recurrent inoperable and metastatic carcinomata of the breast treated by radium and *x* rays. Of these, 158 were too far advanced to benefit by treatment, thus leaving 205 for whom treatment by irradiation offered a reasonable hope for some regression and control of the disease. Irradiation by low voltage was used in the majority of instances, treatment being repeated over the same areas if regression was insufficient or if the disease remained stationary. This form of therapy was employed for supraclavicular or axillary involvement and for diffuse cutaneous recurrences with striking disappearances of cutaneous nodules. For large, well circumscribed recurrences the radium pack or radium tray was used, while bare tubes of emanation were employed in the smaller superficial recurrent nodules or in axillary nodes. Of the 205 favourable cases 34 (17 per cent.) patients are alive, and the authors are convinced that treatment by irradiation gives a definite prolongation of life with an amelioration of many symptoms and may control the disease for some years. As prophylactics against recurrence they advocate careful selection of patients for operation and pre-operative and post-operative cycles of *x*-ray treatment.

Obstetrics and Gynaecology.

352. Late Urinary Sequels of Gynaecological Operations.

G. ALBANO (*Ann. di Ostet. e Ginecol.*, December 31st, 1925, p. 861) remarks that in addition to the retention of urine immediately following gynaecological operations, which yields promptly to treatment by urotropine, it is not uncommon to encounter urinary symptoms beginning from three weeks to three months subsequently. These late symptoms have been considered to indicate a bacterial invasion, and the condition has been termed by Grandyean post-operative cystitis; but in addition to cases in which there is clearly an element of infection others exist in which the disturbance is functional; these are often associated with the menopause. The symptoms, arranged in order of prevalence, are: diurnal frequency of micturition, cystalgic pain, pyuria, nocturnal frequency, dysuria, and haemorrhage at the end of micturition. Albano found that late urinary symptoms occurred after 18 per cent. of gynaecological operations, and were most frequent after operations on the uterus; careful inquiry showed that, as a general rule, the earliest symptoms were experienced within the first thirty days. Prognosis is favourable, and most cases speedily clear up spontaneously or after medical treatment.

353. Evolution of the Graafian Follicle and the Corpus Luteum.

W. SHAW (*Journ. Obstet. and Gynaec. of the British Empire*, Winter No., 1925, p. 679) points out that very little attention has been paid to the Graafian follicles which do not rupture and shed their ova. He describes the results of investigations of young and degenerated corpora lutea, and gives an account of the atretic processes in follicles which do not rupture. The ovaries were obtained from patients who were operated upon for various pelvic conditions. Although a minor degree of follicular ripening frequently occurs before puberty no ovum is shed, and no corpus luteum is produced. The majority of follicles formed before puberty undergo atresia, other primordial follicles maturing in their place. The process of ripening occurs before rupture of the follicle and ovulation ensue. The size of the follicle increases through the distension of the cavity with liquid, and the granulosa cells proliferate and hypertrophy, the most marked change being seen in the cells of the theca interna layer, which increase in bulk and number, assume a brown colour, and their protoplasm becomes granular. Shaw has obtained three specimens of very early corpora lutea, and gives a brief account of their development. He concludes that the large lutein cells are derived from the granulosa layer of the follicles; the paralutein cells develop from the theca interna layer. The corpus luteum becomes converted into a corpus albicans in about eight months. The following atretic structures are derived from the Graafian follicle: the corpus atreticum, the corpus candicans, the corpus fibrosum, and the corpus restiforme.

354. Appendicitis and Pregnancy.

MAORTÚA and G. DUARTE (*Arch. de med., cir. y esp.*, February 20th, 1926, p. 337), who record a fatal case in a woman aged 27, illustrate the rarity of appendicitis in pregnancy by the fact that Reeb's case was the only instance of the kind among 5,000 pregnancies in the Strasbourg maternity. The gravity of appendicitis in pregnancy is shown by the following high case mortality reported by various observers: 50 per cent. among 486 cases (Schmid), 59 per cent. (Rosner), 50 per cent. (Heaton), and 53 per cent. (Abrahams). In the present case, which the authors regard as an example of recurrent appendicitis, the exciting cause was probably a gastro-intestinal disturbance which occurred two nights before the attack. Operation was performed within twenty hours of the onset. A gangrenous appendix was found with turbid sero-purulent fluid in the peritoneal cavity. Removal of the appendix was followed by posterior colpotomy and drainage. Death from peritonitis occurred forty-eight hours after the operation.

Pathology.

355. Filter-passing Forms of Bacteria.

P. HAUDUROY (*C. R. Soc. de Biologie*, February 5th, 1926, p. 246) filtered some water containing bacteria through a Chamberland L3 candle that had been carefully tested. The filtrate was divided into two parts, one of which was left untouched, and the other added to peptone water; both parts were incubated at 37° C. After a week small white granules were visible in the culture, forming a slight deposit at the bottom of the tube. Microscopically they consisted of Gram-negative granules of irregular shape, and varying in size between the limits of visibility and the diameter of a staphylococcus. No change occurred in the culture on further incubation, even after several months. Subculture was attended by great difficulty, but after several attempts it proved successful. The description of the appearances on subculture is reserved for a future article, but apparently the growths obtained were of an unusual type. After several subcultures Hauduroy succeeded in demonstrating bodies that morphologically and biochemically were indistinguishable from normal bacteria. In particular he isolated one bacillus closely similar to, if not identical with, *B. typhosus*. In conclusion he affirms that in polluted waters there exist abnormal forms of bacteria which can be isolated by filtration. They pass through a stage in which they are invisible, followed by one in which they assume a granular form, and eventually reach a stage in which they develop into normal bacteria.

356. Mediastino-pulmonary Lymphosarcoma.

C. ROUBIER (*Rev. de méd.*, No. 7, 1925, p. 587), who records three illustrative cases, states that in the large group of intrathoracic cancers a special place must be reserved for a peculiar variety of new growths which originate in the mediastinal glands, and are characterized by a very early invasion of the lung and almost exclusively pulmonary symptoms. The proof of the mediastinal origin of such tumours is supplied by their morbid anatomy, which reveals the existence of a diffuse cancerous mediastinitis invading one of the lungs by the hilum and penetrating the pulmonary substance along the peribronchial sheaths. Histological study of these growths shows that their structure, like that of malignant tumours of the mediastinum, is that of lymphosarcoma. Unlike cancers of the pulmonary hilum, in which signs of compression predominate, they do not give rise to any pressure symptoms. Mediastinal symptoms are completely absent, and the clinical picture is that of a chronic pulmonary affection, which may be mistaken for pleurisy or tuberculosis. Invasion of the lung may occur in several ways. The growth may attack an upper or lower lobe in which it remains localized (mediastino-lobar cancer), or it may extend along the fissure between the lobes (mediastino-fissural cancer). These lymphosarcomatous tumours are generally of large size and rapid growth, and often give rise to multiple metastases. Sometimes they undergo softening and form cavities full of a puriform fluid which may be mistaken for pulmonary abscesses. The course is rapid and death from progressive cachexia occurs in a few months. Association with pulmonary tuberculosis is not an exceptional occurrence.

357. Action of Mercury Vapour Arc Baths upon the Blood.

R. G. BANNERMAN (*Brit. Journ. of Radiol.*, February, 1926, p. 71) reports the result of an investigation of the effect on the blood of rather heavy single doses of light from the mercury vapour lamp, administered in cases of pseudo-coxalgia and certain orthopaedic deformities, as well as in surgical tuberculosis. In all cases irradiation was followed by a diminution of the number of red corpuscles, but in the absence of blood volume determinations it is not certain whether this is a real or an apparent change. The reduction occurred immediately and persisted for several days, to be succeeded in some cases by a rise above the original level. The total leucocyte count was sometimes, but not always, increased, but a rise in the polymorphonuclear cells occurred, and in many cases there was a reduction in the number of mononuclear cells. Monocytosis followed in some cases, but after a few days the normal number and distribution of the cells returned. Eosinophil cells were markedly diminished, both relatively and absolutely, after the exposure, but then returned to or exceeded the original number. The sedimentation rate increased soon after exposure to the lamp and remained at a high level for some days; it was then reduced to or below the original level. As a rule there was an increase in the ability of the defibrinated blood to destroy staphylococci for some hours after light treatment, but this fell to the original figure in twenty-four hours, and in some cases remained subnormal for some time. Bannerman thinks it significant that these results were not obtained in patients habituated to light treatment and already pigmented, but were associated rather with the stage of erythema, which is a sequel of such massive doses. He draws the conclusion that such excessive dosage is to be avoided.

358. Filterable Forms of Tubercle Bacilli in Apparently Normal Organs.

J. VALTIS (*C. R. Soc. de Biologie*, February 19th, 1926, p. 376), who has already shown that it is sometimes possible to pass a suspension of tuberculous material through a Chamberland filter without depriving it of its infectivity to animals, now reports that the filter-passing forms of the tubercle bacillus may be present in apparently normal organs. Three rabbits were injected intravenously with a bovine strain of tubercle bacillus; a fortnight later they were killed, and their spleens, which appeared quite normal, were ground up in a mortar with sterile sand, suspended in saline, and filtered through a Chamberland L2 candle. Two days later 15 c.cm. of this filtrate was injected subcutaneously into two guinea-pigs, and on the following day 10 c.cm. was injected, the filtrate having been kept on ice in the meantime. One of these animals died three and a half months later, and no local lesion or local adenitis was found, but the spleen was enlarged and showed haemorrhagic points and caseous lesions. The tracheo-bronchial glands were enlarged, and typical tubercles were found in the lungs. In all these lesions the tubercle bacillus was found microscopically. The second animal was killed two days later. No local lesion was present and the spleen appeared healthy, but there were two nodules in the omentum, and the tracheo-bronchial glands were enlarged. In both lesions Koch's bacillus was found. It would appear from these experiments that filterable forms of the tubercle bacillus may be present in the apparently healthy organs of tuberculous animals; that they are virulent, giving rise, on injection into guinea-pigs, to typical tuberculous lesions containing acid-fast bacilli; but that the type of disease they cause is different from that usually observed after subcutaneous inoculation of ordinary tubercle bacilli.

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

359. Bronchial Asthma in Children and Young Adults.

A. H. ROWE (*Amer. Journ. Dis. Child.*, January, 1926, p. 51) records his experience of 110 cases of bronchial asthma in children and young adults treated for a minimum period of four months, 77 being under 10 and 33 between 10 and 20 years of age. He considers it to be the most serious of all respiratory disturbances due to allergy. Skin testing with proteins of the organic substances which may cause asthma should, he thinks, always be a routine procedure, and retesting may be necessary when a satisfactory result does not follow a course of treatment. The proteins used were those associated with food reactions—namely, wheat, corn, oats, rice, egg, milk, fish, nuts, meats, fruits, and vegetables—while the animal emanations concerned included those arising from feathers, horse, cat, rabbit, sheep, and silk. Vegetable substances employed were orris root, and tree and spring and autumn pollens. One or more positive reactions were given by 95 per cent. of his patients, 71.7 per cent. reacting to proteins of animal emanations; 58.2 per cent. of these were due to feather proteins, and the use of food and pollen proteins gave rise to many cutaneous reactions. Multiple sensitization was the rule in nearly every instance, and treatment based upon the results of the tests was satisfactory in 91 per cent. of the cases. Rowe regards climatic change as unnecessary, and considers that surgery of the nose and throat is contra-indicated in asthmatic patients, except in so far as it may improve the general health.

360. Hyperthyroidism in Children.

R. S. DINSMORE (*Surg., Gynecol. and Obstet.*, February, 1926, p. 172) states that hyperthyroidism in children is more common than is generally supposed, and suggests that cases will be reported more frequently in the future. The etiology of this complaint is unknown, but in a small percentage of cases the onset appears to follow an acute infection. The commencement is acute, the symptoms being nervousness, followed by enlargement of the thyroid gland, with tachycardia and exophthalmos. Cases of acute hyperthyroidism are rare but may occur. Many of these children show no decrease in weight and their mentality is normal for their age. Dinsmore states that induced hyperthyroidism may follow the prophylactic use of iodine, but the symptoms usually disappear when the drug is discontinued. In the majority of the author's cases the disease was chronic, and in nearly all thyroidectomy was necessary. These children are apt to react seriously to operative procedures, and any operation should be planned so as to require a minimum amount of anaesthetic. Excellent results often follow ligature of the vessels. When other foci of infection are present these should not be removed until the patient has recovered from the thyroidectomy.

361. Measles and Tuberculosis.

W. BEISKEN (*Zeit. f. Kinderheilk.*, December 16th, 1925, p. 353) remarks that almost all writers maintain that measles and whooping-cough are the determining causes of tuberculous meningitis in latent or manifest tuberculosis. On the other hand, Noeggerath and Eckstein at the Freiburg children's clinic found that measles and whooping-cough did not cause any general activation of tuberculosis, and their observations were confirmed by S. Meyer and Burghard from examination of 1,064 cases of whooping-cough. In 162 cases of tuberculous meningitis treated in the children's clinic of the Medical Academy at Düsseldorf from 1908 to 1924 Beisken found that 64 had a history of no previous disease, especially measles, and only 56 had actually had measles. This figure, moreover, was considerably reduced by the fact that it included children whose attacks of measles had occurred as long as twelve years before the onset of tuberculous meningitis. Only 40 children had had measles within a period of three years before the meningitis, and it was only during this period that measles could have had any causal influence. Moreover, the curve of tuberculous meningitis during the seventeen-year period of observation remained at approximately the same level and bore no relation to the measles mortality, which was subject to considerable fluctuations. There was therefore no justification for regarding tuberculous meningitis as being caused by measles. Attention was also paid to the relation between tuberculous invasion of other organs and a previous attack of measles. In 18 cases of tuberculosis the pulmonary lesions were well marked, in 16 moderate, and in 128 slight. It was a remarkable fact that in cases with only slight pulmonary lesions the number of measles cases was particularly high (42), whereas only 7 of the severe and 7 of the moderate cases had had a previous attack of measles.

332. Trophic Ulceration following Lethargic Encephalitis.

E. HOFFMANN (*Deut. med. Woch.*, February 5th, 1926, p. 238) states that Büchler (*Klin. Woch.*, No. 31, 1925) has recently described vasomotor trophic symptoms following lethargic encephalitis. In addition to a case of symmetrical gangrene of the hands, Büchler mentions a similar case of Wielig and one of Biernig of gangrene of the leg. Ulceration of the bladder and skin has been reported by Adler, who attributes it to trophic changes. Hoffmann now reports a case of trophic ulceration in a man aged 27, the subject of Parkinsonism, who had had lethargic encephalitis four and a half years previously, and now presented ulceration of the left nasal cavity, hard palate, and buccal mucosa. Tuberculosis, sporotrichosis, syphilis, and diphtheria could be excluded by the appropriate tests. Lumbar puncture showed nothing peculiar in the cerebro-spinal fluid, and therapeutic tests with potassium iodide, salvarsan, and bismuth, as well as animal inoculation, had a negative result. Histological examination showed non-characteristic vascular changes. In the absence of any tendency for the lesions to heal, a diagnosis was made of trophic ulceration favoured by salivation. So far as Hoffmann is aware, no similar cases are on record.

333. The Incidence of Syphilitic Aortitis.

C. BRUHNS (*Med. Klin.*, February 19th, 1926, p. 279) states that although salvarsan has reduced the occurrence of secondary and tertiary lesions of the skin, mucous membranes, and bones, yet late nervous involvement and aortitis appear to be getting more common. There is evidence in the literature that aortitis develops in about 25 per cent. of all cases of syphilis. Bruhns now reports the following figures, derived from 200 patients coming from all classes of society, and mostly in men, the cardiac diagnosis being facilitated by the use of *x* rays. Aortitis appeared in 23 per cent. of the hospital patients between eight and thirty years after infection, and in 38 per cent. there were grounds for suspicion that the lesion existed. In the case of private patients there was definite aortitis in 27 per cent., and probable in 31 per cent. Bruhns, therefore, recommends that dermatologists and others who are likely to encounter syphilis in its later stages should make a special examination for aortic lesions, since treatment is far more effective when early. Prolonged or repeated courses of antisyphilitic treatment may avert the serious cardiac complication.

Surgery.

364. Subphrenic Abscess.

A. O. WHIPPLE (*Amer. Journ. Surg.*, January, 1926, p. 1) considers subphrenic abscess the most important variety of intra-abdominal abscesses on account of its nature and sequels, and also because of the difficulty caused by its occurrence as a post-operative complication. When developing as a complication of such severe conditions as a perforating ulcer or appendix, or in gangrenous cholecystitis, the subphrenic abscess does not appear until late in the course of the illness, when sepsis or tumour has greatly enfeebled the patient. It is insidious in onset and course and difficult to distinguish from such thoracic conditions as pulmonary or pleural infections. The irregular drainage from the original focus of disease may distract the surgeon's attention and cause him to overlook for some time the new infection. The mortality of cases in which drainage is provided is 30 per cent. and for undrained cases 80 per cent. A subphrenic abscess may arise from the direct spread of bacterial infection, or from fluid escaping from a leaking or perforated viscus; it may also be due to a distant pyogenic focus. In 1,000 collected cases the foci were: stomach 25 per cent., appendix 21 per cent., biliary tract 16 per cent., and duodenum 5 per cent. Whipple now records 32 cases, the primary foci being as follows: biliary tract 8, stomach 4, duodenum 3, appendix 5, pelvic organs 3, hepatic abscess 2, perforated intestine 2, empyema 2, kidney 2, pneumococcal peritonitis 1, and two undetermined, but associated with tuberculous foci. The colon bacillus was isolated in 13 cases,

streptococci in 9, staphylococci in 5, *B. welchii* in 4, pneumococci in 2, *B. pyocaneus* in 2, tubercle bacilli in 1, and in 7 the etiology was undetermined. With such a variety of organisms concerned it follows that the abscess contents are very variable, but in most cases they are very foul, and contain gas—an important factor in diagnosis. Three clinical types are described. The first is characterized by an abrupt onset, and usually a previous history of some chronic lesion such as ulcer, cholecystitis, salpingitis, or lung abscess. In the second group the abscess develops insidiously, the patient having some obscure lesion, such as carcinoma of the posterior wall of the stomach, or there is a gradual invasion from some thoracic lesion. Such patients are very weak and show no changes in temperatue, pulse, weight, or strength. The abscess may not be found until an autopsy. The third group contains the post-operative cases, and the abscess may be due to errors of drainage or technique; in many cases the patient has been very ill with peritonitis, cholangitis, or liver abscess. The author condemns the use of an exploratory needle, unless it can be left in position and immediate operation be performed. A high white cell count is usual and x rays give the greatest help. A bubble of gas is important; it appears whether the patient is in the sitting or lateral position, and there will be the changing level of the fluid. Where upper abdominal drainage has been employed the patient should be turned over on the face two or three times a day for the first week after operation to empty the subhepatic space, and the drain should be left long enough for a track to be established. Whipple thinks that the tenth rib in the mid-axillary line gives the best approach, and that either intercostal incision or removal of a segment of rib will supply good exposure and drainage, provided the incision is long enough. Electrically lighted retractors assist in the determination of the site and size of the abscess.

385. Post-operative Parotitis.

T. C. PEIGHTAL (*Amer. Journ. Obstet. and Gynecol.*, January, 1926, p. 88) calls attention to acute pyogenic parotitis as a post-operative complication and gives notes of nine cases. Two were of the mild form, probably due to some temporary duct obstruction rather than to a diffuse glandular inflammation, and they subsided rapidly. In five moderately severe cases the infection involved the whole gland but did not give rise to suppuration or abscess formation, and the characteristic massive induration subsided slowly without incision. In two cases of a severe type suppuration occurred and incision was necessary. The *Staphylococcus aureus* is the most common cause and pneumonia the most frequent complication. Cold applications, mouth washes, and mastication usually suffice by way of treatment in the early stages and in the milder cases, but incision is indicated in the severer cases even before fluctuation is noted, because gangrene may develop rapidly owing to the tough capsule with which the parotid is surrounded. For prevention Peightal urges the systematic examination of the teeth and mouth and the treatment of oral sepsis before operation, and immediate post-operative care of the mouth in emergency operations.

386. The Surgical Treatment of Gall Stones.

K. H. DIGBY (*Annals of Surgery*, January, 1926, p. 47) maintains strongly that whenever a reasonably probable diagnosis of gall stones can be made an operation should be undertaken immediately. He condemns the not infrequent practice of waiting for the attack to subside before operative procedures are commenced. His reasons are as follows. During an attack of gall-stone colic the stone may pass into the common bile duct and give rise to obstructive jaundice from which a biliary type of hepatic cirrhosis may develop. With stones in the gall bladder there is a 2 per cent. surgical mortality, but when they have entered the common bile and common hepatic ducts the mortality rises to 10 per cent. Again, impaction may occur at the ampulla in such a way that the gall bladder forces bile into the pancreatic duct; thus a true biliary colic may be insidiously transformed into an acute haemorrhagic pancreatitis with its high mortality of 75 per cent. or more. The obstruction of the cystic duct may, moreover, lead to such distension that the walls of the gall bladder become devitalized with the sequel of gangrene or perforation. Digby advocates a very free exposure of the biliary tract, using an angled incision such as that of Perthes. The bile duct should be opened just above the duodenum in every case and the main ducts very carefully explored both from within and without. He adds that in most cases it is advisable to remove the gall bladder and cystic duct, the main ducts being protected from accidental injury by a metal T-shaped tube. He recommends that the stem of this tube should be three inches long, the cross piece extending for half an inch on one side and one and a half inches on the other. The long end is passed into the common hepatic duct and the short end into the bile duct, so that the tube is self-retaining. Various sizes of tube, ranging by sixteenths of an inch from 1/8 to 3/4 inch, are sterilized in advance and the appropriate size used. This mechanism permits the safe removal of the gall bladder from the fundus towards the ducts and moderate traction may be employed with impunity.

Therapeutics.

387. Treatment of Hyperchlorhydria by Sodium Bromide.

F. F. MARTÍNEZ (*Arch. de med., cir. y esp.*, February 13th, 1926, p. 293) states that Leven was the first to describe the importance of the solar plexus in the production of numerous symptoms in dyspepsia, and to treat this condition by sodium bromide, which has an important action on various painful symptoms, whether these are due to ordinary dyspepsia or to ulcer or cancer. Leven has shown that the drug acts not only on the gastric nerves, but also on the glandular secretion. Martínez, who records twenty-four personal cases of hyperchlorhydria, gastric and duodenal ulcer, and cicatricial pyloric stenosis, has found that sodium bromide checks exaggeration of the motor and secretory functions of the stomach. Improvement is shown within the first few days of its administration by a permanent disappearance of the clinical symptoms, such as pain, vomiting, dyspepsia, sensation of pharyngeal constriction, salivation, and so on. Other symptoms, such as headache, vertigo, and constipation, are also relieved at the same time. The phosphaturia diminishes, the amount of urea in the urine increases, and the proportion of phosphoric acid to urea approaches the normal. There is a simultaneous fall in the quantity of uric acid and chlorides in the urine. The dose of sodium bromide in adults is 2 to 3 grams a day, but it is harmless in doses of 6 to 7 grams, even when continued for some time.

388. Toxic Effects of "Bismuth-Diasporal."

O. FISCHER (*Dermatol. Woch.*, February 20th, 1926, p. 268) describes a case of severe bismuth poisoning after a course of intravenous injections of bismuth-diasporal, a preparation which has been extensively advertised as having a low degree of toxicity. A man, aged 26, who had a subacute polyarthritis, a specific sore throat, and indolent enlarged submaxillary glands, was found to have spirochaetes in the pharyngeal mucus and a strongly positive Wassermann reaction. He had contracted syphilis in 1919, and subsequently received various kinds of antisyphilitic treatment. In 1922 he had syphilitic ulceration of both feet which was cured by a course of mercury and salvarsan. Bismuth-diasporal treatment began with four injections of 50 mg. each in the course of ten days. In the following week, two injections, each of 100 mg., were given, all without toxic symptoms, but after the sixth injection the patient had pain in the lower teeth and a "bismuth line" around the lower incisors. The sore throat had disappeared after the second injection. As the polyarthritis became worse, the patient received ordinary antirheumatic treatment, and the seventh injection was postponed for five days; but immediately after this the patient complained of pain at the site of the injection and the whole arm became stiff, apparently owing to phlebitis. The patient had severe attacks of abdominal pain and diarrhoea, followed by blood-stained, mucous stools. He had also a severe haematuria, and other signs of acute nephritis, such as albuminuria and epithelial casts. The abdomen was very rigid, especially in the left flank. Proctoscopic examination was painful and revealed an extensive ulceration of the mucosa. The enteritis and nephritis improved, and four weeks later the patient was discharged.

389. Cod-liver Oil Spray in Laryngeal and Tracheal Tuberculosis.

LEROUX-ROBERT (*La vie méd.*, February 5th, 1926, p. 189) states that for the last ten years he has used inhalations and sprays of cod-liver oil in the treatment of tuberculosis of the larynx and upper respiratory tract. In cases where the larynx alone is affected the supraglottic method is employed. The practitioner draws out the patient's tongue and passes the syringe as far down as possible in close contact with the posterior wall of the epiglottis, a few drops of oil being injected at each inspiration until 3 to 5 c.cm. in all have been given at each sitting. When both the larynx and upper respiratory tract have to be treated one of two methods may be employed. (1) Tracheal injection: The injection is made with the aid of a laryngoscopic mirror, 10 c.cm. being introduced between the vocal cords. Novocain anaesthesia may be required in patients with a very irritable larynx. The only contraindication to tracheal injection is haemoptysis. (2) Leroux-Robert's method of spraying and inhalation: There is no contraindication to this method, which can be

practised by the patient himself several times a day. A nasal spray is converted into a laryngeal spray by the addition of a glass tube with a curved extremity, which is inserted behind the base of the tongue. When the bulb is squeezed the patient makes an inspiratory movement and thus allows the oil to penetrate into the larynx and upper respiratory tract. Treatment by cod-liver oil is specially indicated in the medical forms of laryngeal tuberculosis. The best results are obtained in the early stage of erythema and congestion, but very marked results are also observed in the stage of extensive infiltration of the vocal cords. Lastly, the pain due to small ulcers may be relieved by this method. The effects differ according to the patient and his environment. In hospital involvement of the larynx is usually secondary to severe pulmonary tuberculosis, while in private practice laryngitis is often observed at the onset of the disease, so that it may be regarded as primary. In conclusion, Leroux-Robert states that, apart from cases of tuberculous cavities and surgical laryngeal tuberculosis, more than a third of 200 hospital patients were relieved, improved, or even cured by this treatment. In private practice the results were much more encouraging, good effects being obtained in more than half the cases.

370. The Value of Artificial Heliotherapy.

G. VIANA (*Raggi Ultravioletti*, December 21st, 1925, p. 354) publishes brief records of six cases of pulmonary affections, showing the great benefit which followed treatment by radiation from a Kromayer quartz lamp. For the last fifteen years the author has treated over a thousand cases of various types of disease by violet rays: 211 pulmonary, 117 sciatica, 139 varicose ulcers, 227 arthritis, and 231 cutaneous diseases. The chief effects noted were slight rise of temperature, euphoria and perspiration, improved blood pressure, increase in the number of red corpuscles, haemoglobin increased from 50 to 72 per cent., diminution in number of leucocytes, and improved general condition. In the six cases recorded either tuberculosis or a positive tuberculous skin reaction was present. It is not suggested that treatment by violet rays is a universal panacea, nor should it replace regular modes of treatment, but as a supplementary aid the author, after his experience, finds it of undoubted value.

371. Calcium Lactate in Migraine.

C. E. RIGGS (*Minnesota Med.*, February, 1926, p. 87) advocates the use of calcium lactate as a preventive in migraine. Notes of six cases are given in which attacks of migraine were aborted by administering 30 grains of calcium lactate at the first warning of the onset. It is not claimed that the drug will cure an attack when once established, but in the majority of cases it prevents their occurrence, and in some instances renders them much milder and less frequent. Riggs suggests that the tablets should always be kept in readiness, and that they should be fresh since age renders them inert.

Anaesthetics.

372. Combined Nitrous Oxide and Local Anaesthesia.

P. K. GILMAN (*Amer. Journ. Surg.*, January, 1926, p. 21) states that the combination of nitrous oxide and novocain in abdominal surgery, together with the avoidance of abrupt surgical manipulations, enables the operation to be performed with a very slight degree of anaesthesia, complete relaxation of the abdominal wall being obtained. Preliminary treatment includes an enema and a liberal diet; an injection of morphine and atropine is given half an hour before the anaesthesia begins. With the patient anaesthetized by a mixture of nitrous oxide and oxygen the final skin preparation is performed, after which the entire abdominal wall on the side of the proposed incision, or of both sides in the case of a mid-line opening, is blocked with novocain from the level of the sixth intercostal above to the anterior superior spine of the ilium below. Before opening the peritoneum the entire length to be incised is infiltrated with novocain. The utmost gentleness must be used in opening and elevating the incised abdominal wall; pressure and traction on the tissues should be as light as possible, sponging and clamping performed without any roughness, and care must be taken in suturing the peritoneum and closing the abdomen. Shock is thus largely eliminated, and Gilman states that it is by no means unusual for the patient to leave the operating table with an unaltered blood pressure. Post-operative nausea and vomiting are rare, and at the most only slight; intestinal paresis seldom occurs. As compared with ether narcosis, this combined form of anaesthesia enables the patient to take fluids earlier after the operation and to recover strength more rapidly; it causes much less general post-operative distress. Gilman maintains also that the relaxation obtained is equal to that produced by deep ether anaesthesia.

373. Spinal Anaesthesia in Urology.

M. DEVROYE (*Le Scalpel*, February 20th, 1926, p. 177) discusses the difficult problem of anaesthesia in urological operations. Chloroform is particularly dangerous in the case of renal operations, or of enlarged prostate in the elderly in whom the kidneys already show senile changes or are impaired by the chronic urinary retention. Ether, though less toxic than chloroform, is difficult to use without incurring the risk of operative shock. Devroye, therefore, recommends the more frequent use of spinal anaesthesia according to the method of Hannecart, from which very satisfactory results have been obtained. Novocain has been recommended by many for operations on the prostate, but Devroye prefers scurocaine powder (a French modification) administered in a 1 per cent. solution in sterile distilled water. The adult dose of such a solution is given as 175 to 200 c.cm., and a preliminary injection of 1 to 2 cg. of morphine is advised. The spinal anaesthetic should be introduced slowly, especially after the first 100 c.cm. has entered; more rapid injection incurs the risk of convulsive attacks, which, though never serious and very transitory, are nevertheless better avoided. Anaesthesia is said to be obtained in about twenty to thirty minutes, nearly always accompanied or preceded by somnolence, but with a full pulse. In some cases consciousness is retained with loss of sensation. The tendency to sleep may persist for some time after the operation, but there is no operative reaction, such as vomiting or dyspepsia. Devroye has used this method in twenty-one cases, and reports that Hannecart has tried it on 200 occasions without ill results. The chief objection is the length of time before anaesthesia is complete.

374. Ether in Lung Operations.

M. LIDWILL (*Med. Journ. of Australia*, December 19th, 1925, p. 698) advocates ether administration in operations on the lungs as the safest and best anaesthetic. He considers that the so-called "ether pneumonia" is not a direct result of the anaesthetic, and in no way contraindicates its use. In his opinion most of the post-operative "pneumonias" are not true pneumonias, but are either infarcts due to emboli or thrombosis or collapse of the lung; he believes that when a true pneumonia occurs it is chiefly due to inhalation of foreign matter or to chill from exposure during the operation. His practice is to anaesthetize by the open method until the jaws are completely relaxed, when a Belfast linen catheter can be passed into the trachea and intratracheal anaesthesia commenced. After a few minutes the anaesthesia may be reduced and the patient kept in a state of light anaesthesia throughout the operation and placed in any position desired by the surgeon. When the pleura is reached co-operation between the anaesthetist and the surgeon is most important, since the former has complete control of the inflation of the lungs; care must be taken that the vapour is not pumped in at too great a pressure, 25 mm. of mercury generally sufficing. He adds that if it is desired to stitch the parietal and visceral layers of the pleura together these can be brought into apposition by inflating the lungs by placing the hand over the mouth and compressing the nose until the stitching is completed, when removal of the hands will allow the lungs to deflate. Such inflation is necessary when opening a hydatid cyst or when searching for a bronchiectatic cavity, and since 25 mm. of mercury only equals the pressure in the lungs in blowing out a candle or in blowing air through a tube immersed in six inches of water no evil results need be expected from its use.

Obstetrics and Gynaecology.

375. Treatment of Sterility in Women.

H. CAUFMAN (*Paris Méd.*, February 6th, 1926, p. 135) discusses the effect of small doses of x rays in treating sterility in women, and reports in detail the case of a patient, aged 27, who had suffered from metrorrhagia since the age of 19, and was sterile owing to functional ovarian disturbance. The uterus was small, but there was no evidence of disease or abnormality in any of the pelvic organs. Treatment of the ovaries and spleen by x rays resulted in the cure of the metrorrhagia, and two normal menstrual periods followed. The patient then became pregnant and gave birth to a healthy child. Caufman mentions three explanations of this restoration of lost reproductive power as the result of x rays—namely, stimulation of the ovarian tissue; the cure of some slight ovarian lesion; and destruction of impaired follicles, thus leaving the way open for the development of more robust follicles. He does not favour particularly any of these theories. He has also cured amenorrhoea in a woman by administering x rays for pruritus vulvae, and has had cases of pregnancy following the treatment of fibroids by x rays.

376. Compression of Aorta in Post-partum Haemorrhage.

O. NEUMANN (*Zentralbl. f. Gynäk.*, February 20th, 1926, p. 469) reports favourable results obtained in severe cases of bleeding after labour by application of a clamp designed to compress the abdominal aorta. This consists of a pad placed over the lower part of the spine and joined by an adjustable rigid support to a smaller padded clamp which is applied to the abdomen and is regulated by a screw so as to give the requisite amount of pressure. It has been found effective in controlling haemorrhage, and its use has in general been found free from the dangers attending the application of Momburg's abdominal ligature; nevertheless, it has occasionally been found to injure the viscera. A case of ileus is recorded which followed fifteen minutes' application of the compressing clamp, and allusion is made to a fatal case, mentioned by Schultheiss, in which the only morbid finding was a haematoma in the root of the mesentery extending to the solar plexus. The author believes that a carefully applied aortic clamp is a valuable instrument for the general practitioner.

377. Corpus Luteum Necrosis in Hyperemesis Gravidarum.

D. BRANNAN and M. COHEN (*Surg., Gynecol. and Obstet.*, February, 1926, p. 228) report two fatal cases of hyperemesis gravidarum occurring in the third month of pregnancy; necrotic changes were found in the corpus luteum. In one case, a primipara, the illness lasted forty-four days, and on *post-mortem* examination the only gross change found was marked pulmonary oedema. Microscopically there was shown to be considerable coagulative necrosis of the corpus luteum, fatty changes in the liver, and a parenchymatous degeneration of the kidneys. In the other case, a multipara, the disease had lasted only about sixteen days. The macroscopic *post-mortem* examination showed oedema of the lungs and an adenomatous goitre. Microscopically there was a massive necrosis of the corpus luteum with extensive liquefaction of the lutein cells; there were fatty changes in the hepatic central cells with here and there one or more necrotic cells, and the kidneys showed parenchymatous degeneration. The authors state that the changes occurring in the corpus luteum resulted from the underlying toxaemia, and do not suggest that the necrosis and resulting deficiency in the secretion of the corpus luteum are the cause of hyperemesis gravidarum.

Pathology.

378. The Pathogenesis of Polypi of the Septum.

P. MANGABEIRA-ALBERNAZ of Brazil (*Arch. Internat. de Laryngol., Otol. et Rhinol.*, February, 1926, p. 139) reports three cases of nasal polypi in persons who had suffered from leishmaniasis. In all his cases leishmaniasis had been successfully and rapidly cured by intravenous injections of tartar emetic, leaving the characteristic cicatrices of the disease. From one to two years later the patients presented themselves at the author's clinic suffering from polypi of the septum, and he found that in one case two polypi had formed on the site of former ulcerations due to leishmaniasis. He attributes this occurrence to the fact that the previous lesions were cured by very short courses of tartar emetic, but that the disease remained latent and as a result of later activity gave rise to the polypi. He is of the opinion that if the patients had submitted to a longer course of injections this recurrence would not have taken place. Mangabeira-Albernaz draws attention to the close resemblance between leishmaniasis of the mucosal surfaces and rhinoscleroma. This has also been pointed out by Moraes of Bahia (Argentine); the work of Alvarez of San Salvador shows the two diseases to be intimately connected in that country, while Kubelik (Poland) and Symmers (Prague) have treated rhinoscleroma by injections of tartar emetic with great success.

379. The Prevention of Rickets by Irradiated Cholesterol.

R. FABRE and H. SIMONNET (*C. R. Soc. de Biologie*, February 26th, 1926, p. 455) confirm the results of American workers on the activation of cholesterol by ultra-violet rays, but find that the time necessary for the activation is less than has been supposed. The rats with which these experiments were made were fed on cornflour, butter-fat, egg albumen, calcium carbonate, and sodium chloride. The diagnosis of rickets rested on the macroscopic demonstration of the costo-chondral rosary, the histological and the radiographic examination of the bones and joints, and in some instances on McCollum's line test. The cholesterol, in a 2 per cent. solution in petroleum ether, was exposed to a mercury vapour lamp running at 115 volts and 3.5 amperes for periods of 15, 45, and 60 minutes. The distance of the solution from the lamp was 30 cm. After irradiation the cholesterol was suspended as a 2 per cent. solution in olive oil, and the ether driven off in a vacuum. Of this solution three drops, corresponding to 1.5 mg. of cholesterol, were given daily to each of the experimental rats; the control animals received non-irradiated cholesterol. After twenty-five days the animals were killed. The controls and the rats that had received the 60-minute irradiated cholesterol showed typical signs of rickets. The animals receiving the cholesterol that had been irradiated for only 15 minutes were absolutely free from rickets, while those receiving the 45-minute irradiated cholesterol showed doubtful signs of rickets. Thus the optimum results were obtained with cholesterol which had been irradiated for 15 minutes. Irradiation in an alcoholic solution was less satisfactory. The observation was made that the irradiated cholesterol was more permeable to light of short wave-length than was the non-irradiated cholesterol.

380. The Effect of Sodium Salts on Blood Pressure.

L. AMBARD and R. CAHN (*Bull. et Mém. Soc. Méd. de Paris*, January 28th, 1926, p. 77) point out that though a salt-free diet is one of the few ways of reducing blood pressure that has stood the test of time, experimental work does not substantiate this. One of the experiments which led them to this conclusion is described in detail. The patient was a nephritic of the azotaemic type, with urine containing about 1 per cent. of albumin. The sodium chloride in his diet was reduced first to 3 and then to 2 grams a day. The blood pressure was measured daily and the amount of sodium chloride excreted each day was calculated. After fourteen days of this regime the blood pressure was unaltered—195/125. Less urine was being excreted daily, and the total amount of chloride lost was 18 grams in excess of that ingested. A normal dietary was then given containing about 15 grams of salt a day. The blood pressure rose in a week to 230/145 and the experiment was then stopped. Another point which the authors mention is that the blood pressure taken morning and evening showed no difference in reading during the salt-free period, but that during the latter part of the experiment the evening reading (after the ingestion of a large meal containing salt) was higher.

381. M. RENAUD (ibid., p. 102), in studying the action of sodium citrate on the blood and on the cardio-vascular system, has found that large doses given daily by the mouth raise the blood pressure. The tests were made on patients with arterio-sclerosis whose pressure was already high, and in every case it rose still higher. It fell again in two or three days after the salt had been stopped. In view of the effect that this salt has on haemorrhages when given intravenously the author suggests that it may have a specific action on the vasomotor centre and that its action when given by the mouth is due to accumulation of the salt. He thinks that in all cases where it is used the dosage should be controlled by the regular use of the sphygmomanometer.

382. Tubercle Bacilli in the Faeces.

C. VERDINA (*Giornale di Batteriologia e Immunologia*, January, 1926, p. 34) has examined the faeces of 40 patients suffering from pulmonary tuberculosis: 50 grams of faeces were ground up in a mortar with saline till a homogeneous suspension was obtained. This was filtered through sterile gauze, mixed with an equal volume of 10 per cent. sulphuric acid, shaken repeatedly for an hour, and centrifuged for fifteen minutes at 3,000 revolutions a minute. The supernatant fluid was decanted, neutralized with sodium hydrate, and the sediment thus obtained was examined microscopically, injected into a guinea-pig, and planted on Petroff's medium. All positive cultures were tested for virulence by injection into guinea-pigs. Of 20 patients whose sputum was found to contain tubercle bacilli on microscopical examination the bacilli were found microscopically in the faeces in 15, by cultural examination in 13, and by guinea-pig injection in 14. It was observed that the injection into guinea-pigs of the pure cultures obtained gave rise nearly always to a disease of low virulence, characterized by small foci limited to the lungs, liver, and glands. Of 20 patients in whose sputum no tubercle bacilli could be demonstrated microscopically bacilli were found in the faeces microscopically in 4, by culture in 3, and by guinea-pig injection in 3. It appears, then, that tubercle bacilli may sometimes be found in the faeces when they are absent from the sputum. This, the author thinks, occurs in those cases in which the pulmonary lesion is closed, but in which tubercle bacilli are occasionally circulating in the blood; excretion occurs by the biliary tract into the intestine.

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

383. "Pleural Epilepsy."

E. LEURET and J. CAUSSIMON (*Journ. de Méd. de Bordeaux*, February 25th, 1926, p. 143) describe under the above title certain rare muscular spasms occurring in the course of the production of an artificial pneumothorax. They report four cases personally observed and refer to nine reported by others. The symptoms come on suddenly and do not seem to have any direct relation to the amount of pain. The first thing noticeable is a change of colour and kind of sardonic grin. Usually the symptoms appear after the puncture and not during insufflation. Consciousness may be completely or only partially lost, vasomotor blotches may appear, convulsions are often present but tonic spasm is more common, the reflexes may remain unchanged, and the pulse is sometimes unaltered. Prognosis in the majority of cases is favourable, the attack passing off in three or four hours. In more severe types coma sets in almost at once and death follows. Any attack lasting more than six hours is likely to end fatally. However alarming and serious these attacks are they are fortunately very rarely met with, and then more often in women, but not necessarily neuropathics. The authors do not believe the attacks to be due to gaseous emboli, more especially because they often start before any air has been introduced. In one case it was only at the thirty-fifth insufflation that an attack supervened; it proved fatal. The fourth intercostal space in the axillary line, especially on the right side, appears to be a dangerous area, as more attacks followed puncture in that region than in others. In nearly every case the pleura has been unhealthy, and in the authors' view the cause of the attacks is reflex action from an abnormally sensitive pleura; where the pleura is healthy no trouble has arisen.

384. Cardiac Extra-systoles in Childhood.

M. H. BASS (*Journ. Amer. Med. Assoc.*, February 6th, 1926, p. 387) points out that extra-systoles—premature and abnormal cardiac contractions—start at some abnormal site in the auricles or ventricles. The extra beat, coming before the heart muscle has had time to recover from the previous contraction, is usually smaller and weaker than the regular beats, and is followed by a compensatory pause, so that the irregularity is easily diagnosed by palpation of the pulse and the apex beat. Extra-systole in childhood may be toxic, idiopathic, or emotional in origin. The toxic variety is due to infectious toxins associated with such conditions as rheumatism, tonsillitis, and diphtheria, or to drug toxins, such as digitalis, and the salicylates. This variety lasts usually for only a short time. The idiopathic type of extra-systole starts without apparent cause and continues for some years. The nervous or emotional type includes cases in which premature beats follow a great mental shock or emotion. The author gives clinical illustrations of the three types, and concludes that extra-systoles are not of very serious import in childhood; the involvement of the heart muscle, though sometimes acute, is not necessarily grave. Medicinal treatment is seldom required. For extra-systoles occurring in acute diseases such as rheumatism or diphtheria, the specific treatment for the infection is alone necessary, but the child should be kept at rest for a prolonged period subsequently. Quinine, quinidine, and digitalis have been shown to diminish the number of extra-systoles, and in some cases to bring about their disappearance, but such a result appears to have been only temporary, and in the author's cases drugs were found to be of no use.

385. Black Tongue.

J. MONTPELLIER and A. CATANEI (*Ann. de Derm. et de Syph.*, February, 1926, p. 78) report two cases of black tongue, in one of which, despite treatment, the condition had lasted for six months. The troublesome symptoms were slight pharyngeal pain on deglutition, a sense of fullness in the mouth, and salivation. The dorsum of the tongue was evenly furred from two-thirds of an inch to an inch deep, the fur being blackish in the middle and behind. From the fur were removed numerous grains like cooked sago, which at the middle of the tongue were attached by long filiform processes. No swelling of the glands occurred. From the fur were isolated streptococci and the fungus Monilia, which resembled in its reactions Castellani's *M. paratropicalis*, isolated from human sputum.

386. Artificial Pneumothorax in Children.

P. F. ARMAND-DELILLE (*Med. Journ. and Record*, January 20th, 1926, p. 113) believes that in every case of unilateral pulmonary tuberculosis in children, with bacilli in the sputum, artificial pneumothorax should be performed. There is no other curative method at the present time that will cause the disappearance of tubercle bacilli in a few weeks with a real improvement in the general health, cessation of fever, increase in weight, and ability to indulge in sports with moderate care. He has performed this operation in 100 cases and has never had a serious accident; in young children a little subcutaneous emphysema was observed if the child cried between or immediately after the injections, but this always disappeared rapidly. Of these cases up to the present he has had only three deaths—two from purulent pleurisy and one from tuberculous meningitis. In performing the operation for the first time the child is previously given scopolamine and morphine, while novocain is used locally; for babies he considers it best to use chloroform because in crying the pressure in the chest is increased. At the first puncture 50 c.cm. of oxygen and then 200 to 300 c.cm. of nitrogen are injected; in the subsequent punctures from 200 to 500 c.cm. are injected, depending on the resorption. In children these refills must be repeated every other week. Armand-Delille has applied this treatment to children as young as 17 months with success.

387. Diabetes Insipidus of Syphilitic Origin.

L. BABONNEIX and J. LHERMITTE (*Ann. de Méd.*, December, 1925, p. 471), who record an illustrative case, state that it has long been recognized that syphilis is one of the most important causes of diabetes insipidus. Whether the condition is due to gummata at the base of the brain, opto-peduncular meningitis, or complicated tabes, syphilis should always be sought for in cases of diabetes insipidus in which the etiology is uncertain or obscure. The present case was that of a woman, aged 42, picked up unconscious in the street, in whom the presence of syphilis was associated with a new growth, as was shown by the autopsy. The hypophysis appeared normal to the naked eye, but on histological examination the infundibulum was found to be the site of an infective process which was undoubtedly of syphilitic nature.

Surgery.

388. Arterial Pressure after Cervical Sympathectomy.

R. LERICHE and R. FONTAINE (*Arch. des Mal. du Cœur, des Vaisseaux et du Sang*, January, 1926, p. 21) have divided the lower cervical rami communicantes running to the stellate and intermediate ganglia (when the latter is present) of the cervical sympathetic in fifteen cases during the past year, and have studied the subsequent changes in arterial tension. They state that excision of the cervical sympathetic results in a transient production of a paralytic type of circulation through the arteries involved. Careful observations before and after operation show that the variations of arterial tension are quite temporary, and also that after unilateral ablation of the cervical sympathetic or of its communicating branches such variations occur on both sides of the body. The authors cite the case of a woman, aged 26, who suffered from Raynaud's disease in both arms and legs; after unilateral brachial and femoral sympathectomy all symptoms disappeared. This indicates that the vessels have sensory centripetal fibres running among the centrifugal vasomotor fibres. In 1917 Leriche and Heitz applied Pachon's oscillometers to both forearms prior to performing unilateral peribrachial sympathectomy; both instruments registered the same oscillatory changes. Numerous experiments have shown that if one arm be plunged in cold water the arterial tension in both arms falls; this suggests that there is only one vasomotor centre in the medulla. The authors point out that each organ which is innervated by the sympathetic possesses ascending (centripetal) fibres which carry information to the vasomotor centre concerning the state of the organ; this is analogous to the muscular sense in the skeletal system. Ordinarily we are unconscious of the activities of our organs; but if sensory fibres are exposed to abnormally strong stimulation painful sensations are produced, varying with the organ in question. Strong excitation of the intestinal sensory fibres causes colic or, in the case of the intracardiac sensory fibres, an attack of angina pectoris.

The sensory vascular fibres regulate vascular tone, and their abnormal stimulation furnishes an explanation of the pain endured by most patients who suffer from any arterial constriction.

389. Metastatic Infections of the Prostate with Staphylococci.

L. STROMINGER (*Presse. Méd.*, February 20th, 1926, p. 226), from an analysis of the literature, finds that metastatic infections of the prostate may occur in influenza, pyaemia, parotitis, streptococcal angina, pneumonia, typhoid fever, furunculosis, and other diseases. He himself has found them in furunculosis and in anthrax. Reports are given of four fatal cases. The first occurred in a man, aged 65, with a large anthrax pustule on the neck. Some weeks after its incision he was seized with shivering, perineal pain, fever, and frequency of micturition. A prostatic abscess was opened, staphylococci found in the pus, and an autogenous vaccine was given, but the man died a fortnight later. The second case was similar, also following anthrax of the neck; death occurred a month after the opening of the prostatic abscess. The third case was that of a young man with an anthrax-like furuncle of the zygomatic region. Some days after the wound had healed he developed a rigor, high fever, multiple abscesses of the skin, and retention of urine. Surgical treatment was refused, but the prostatic abscess burst after perineal massage, and death followed shortly afterwards. In the fourth case, a man, aged 26, with an anthrax pustule of the neck, pain and haematuria developed five days after the pustule had healed. The prostatic abscess was opened and an autogenous staphylococcal vaccine was given. All went well for a time when, after fever and sudden collapse, he died. At the autopsy the coeliac axis was found to be perforated. Close to it was a metastatic abscess which had destroyed its base. As regards the treatment of these staphylococcal infections the author is in favour of autogenous vaccines—particularly of the local applications devised by Besredka.

390. The Blood Picture in the Diagnosis of Appendicitis.

G. VOLK (*Deut. Zeit. f. Chir.*, January, 1926, p. 367), who reports numerous illustrative cases, states that in acute appendicitis the most exact and reliable information is furnished by the blood picture. If the displacement to the left (modified Arneth formula) does not exceed 15 per cent., leucocytes with rod-shaped nuclei primitive forms are absent, and the number of leucocytes is below 15,000, an expectant policy may be adopted. But if the displacement exceeds 15 per cent. and primitive forms appear there is danger in delay, as the second stage has been reached and abscess formation or gangrene of the appendix has taken place. Advanced lesions of the second stage caused by highly virulent organisms are sometimes not distinguishable haematologically from local or diffuse peritonitis. This, however, is of no practical significance, as immediate operation is required in both cases. An appendicular abscess when completely encapsulated causes only very slight changes in the blood picture. Volk comes to the conclusion that the blood picture is of considerable diagnostic and prognostic value to the surgeon.

391. Bone Dystrophy in Carcinoma of the Breast.

S. LABORDE, H. JOUVEAU-DUBREUIL, and ALICE ROQUES (*Bull. l'Étude du Cancer*, December, 1925, p. 485) record an unusual case of a woman operated on for carcinoma of the breast where the skeleton was affected with multiple and diffuse lesions not typical of metastases. One year after radical removal of the breast the patient suffered from pain in the limbs and the lumbar region. This condition became worse and the pain was very severe. The reflexes were exaggerated and the condition suggested the presence of metastasis in the spinal column, though there was no localized tenderness of the vertebrae. Radiograms showed no definite metastases, but certain diffuse lesions of the lumbar vertebrae, the sacrum, iliac bones, femora, and certain other bones. They appeared as transparent zones resembling vacuoles and suggesting decalcification of the bones. This condition has also been noted in cases of carcinoma of the prostate where the bones have been diffusely affected, as in Paget's disease. These appearances have been regarded as pathognomonic of cancer of the prostate, and a diagnosis has been made on the radiographic appearances. The authors add that the nature of this affection of the skeleton is altogether obscure and is met with in malignant disease of the breast and prostate; in both these diseases metastasis in the bones is not uncommon. It appears that certain types of cancer are able to produce a dystrophy of the bones from some disorder of the calcium metabolism.

392. Gangrene of Scalp due to Hydrogen Peroxide.

K. VON BERDE (*Dermatol. Woch.*, February 20th, 1926, p. 257) reports a case of gangrene of the scalp in a woman, aged 26, who had had her hair bleached by a 30 per cent. solution of hydrogen peroxide. No other chemical was used. Fifteen minutes after the application the hair was partially dried by means of an electrical apparatus, without previous washing. The patient put a tightly fitting felt hat on to her damp hair and arrived home suffering from great pain in the head. She had had a patch of dry scaly eczema on her chin as large as a child's hand for a year previously. Her hair was of a pale golden colour except over a pear-shaped area extending from just behind the vertex to the occipital margin of the scalp; laterally this area reached forwards to both mastoid regions. It was covered by a dirty grey necrotic mass, representing the entire thickness of the scalp down to the aponeurosis, which was visible in places where the necrotic mass had broken down. A probe could be passed for 2 to 3 cm. under the edges of the dead tissues and pus exuded on pressure. The author treated the patient for over two months after the separation of the necrotic tissues, and finally a smooth bare scar measuring 9 by 10 cm. remained. He considers that there were several accessory factors in the production of this condition: the unusual strength of the hydrogen peroxide solution; the chronic eczema of the patient's face and chin; the failure to wash and dry the hair; and finally, the fact that while her hair was still damp with the peroxide solution the patient put on a closely fitting felt hat which interfered with the circulation.

Therapeutics.

393. Treatment of Senile Pruritus by Sodium Silicate.

SCHEFFER, A. SARTORY, and P. PELISSIER (*Progrès méd.*, February 28th, 1926, p. 289), who have several times previously drawn attention to the improvement obtained in arterio-sclerosis by intravenous injection of silicates, and especially sodium silicate, state that F. Luithler of Vienna, inspired by their work, has employed sodium silicate in senile pruritus. In view of the chemical analysis of K. Schultz, who found 51 mg. of silicic acid in 1,000 grams of skin in young persons and only 38 mg. in elderly subjects, Luithler concluded that the elasticity and vitality of the skin were due to the presence of silicic acid in sufficient quantities. He had therefore given patients suffering from senile pruritus an intravenous injection of sodium silicate every two or three days, each injection representing 0.01 to 0.02 cg. of pure sodium silicate, and found that after the first injection the pruritus became less and completely disappeared after the sixth injection. The present authors' experience of nine cases of senile pruritus in arterio-sclerotic subjects aged from 59 to 73 fully confirms that of Luithler. Intravenous injections were given every two or three days, each consisting of two ampoules of 2 or 4 c.cm. of a solution containing 0.005 mg. of sodium silicate per c.cm. The results were as follows. In four cases the itching ceased after the second injection and completely disappeared after the seventh or eighth. In three cases ten to twelve injections were necessary to produce a complete cure. In the remaining two cases the improvement was very marked, but the pruritus was still present after the twelfth injection. As a local sedative a sponge or lint was applied soaked in a solution containing equal parts of sodium silicate and chloral hydrate. The authors attribute the action of the silicate on the pruritus first to the improvement in the organic exchanges in the tissues, causing a diminution of toxins in the circulating blood, and secondly to an improved flow of blood increasing the vitality of the tissues.

394. Oxygen Treatment in Pneumonia.

A. L. BARACH (*Arch. Intern. Med.*, February 15th, 1926, p. 186) discusses the methods and results of oxygen treatment in pneumonia. He points out that to be of therapeutic value oxygen should form from 30 to 60 per cent. of the inspired air, and that the optimum concentration is usually about 40 per cent., the maximum safe concentration being 70 per cent. Trial of various methods showed that administration with the tube and funnel only gave approximately 24 per cent. of oxygen in the inspired air, and was therefore clinically useless; the nasal catheter method varied in effectiveness, but under special conditions with a flow of 2 litres of oxygen a minute the percentage was raised to about 30. With the rebreathing apparatus and a specially constructed glass nose-piece 1 litre of oxygen a minute gave a percentage of 40; the effectiveness of this method was confirmed by observations upon the arterial blood. A glass mouthpiece was used at times when mouth-breathing was present. In the majority of cases treated the portable oxygen tent was used, and it

secured an oxygen-rich atmosphere capable of regulation to the precise concentration desired. The clinical signs of improvement following inhalation of from 40 to 60 per cent. oxygen were: clearing of cyanosis, relief of dyspnoea, diminution of delirium and restlessness, the promotion of sleep, and a slowing of the respiratory and pulse rates. Barach considers that oxygen treatment is not directly curative, but that it maintains the strength of the patient; in six cases it appeared to prolong life until the immunizing process had become established.

395. Deodorants in Cancer.

L. FREUND (*Med. Klin.*, January 29th, 1926, p. 170) discusses the value of the various antiseptics and escharotics used for the removal of the offensive smell produced by cancerous ulcers. Charcoal and other absorbents are not continuous in their action, but during their active period they have an oxidizing as well as a deodorizing action which is of benefit. The fact, however, that they must be applied dry prevents them gaining access to cavities which are often the most foul. The action of douches of hydrogen peroxide or permanganate solution is very fleeting, and, though effective, must be repeated every four hours. Freund thinks that escharotics are the drugs of choice, and he recommends a liquid preparation containing phenol and naphthol. After douching with boric acid or peroxide solution it is applied on a tampon, which must be secured in position and need only be changed two or three times a day.

396. Diathermy in Acute Gonorrhoeal Epididymitis.

M. E. GREENBERGER and S. LUBASH (*Urol. and Cut. Rev.*, February, 1926, p. 88), who report thirteen illustrative cases, maintain that owing to its sedative effects diathermy is the treatment *par excellence* for acute gonorrhoeal epididymitis. Any diathermy machine capable of producing a high frequency current of from 500 to 1,500 milliamperes at an even flow can be employed. The patient is placed in a recumbent position with the small electrode adapted to the affected testicle, while the large electrode is placed over the internal abdominal ring. Green soap lather is applied to both skin and electrodes. The d'Arsonval current should be slowly advanced to the extent of slight discomfort, and then immediately reduced, the point of tolerance varying with the individual. The average length of time devoted to treatment in hospital practice is twenty-five minutes, and in private practice about an hour.

Radiology.

397. Radiological Treatment of Operable Carcinoma of the Breast.

J. H. D. WEBSTER, J. P. THIERENS, and F. G. NICHOLAS (*Brit. Journ. Radiol.*, February, 1926, p. 59) give notes of fifteen cases of operable carcinoma of the breast treated by radium and *x* rays. While not advocating radiation in preference to operation in such operable cases, they point out that, since radiation has sometimes caused the disappearance of inoperable growths, it is important that radiologists should study the problems of treatment of operable breast cancers with a view to determining the best methods of radium and *x*-ray therapy to be adopted. From their experience the authors consider that the possibility of radiation treatment should be more freely offered to patients than is at present the case, and that they should not be told that there is no alternative to operation. Eight of the cases now recorded were treated by *x* rays, two by combined radium insertion and *x* rays, and five by radium surface applications. Of the fifteen patients, one died from bronchopneumonia not connected with the carcinomatous condition and another from the disease two years after treatment had been discontinued. In one there was an abdominal metastasis, but as recently as two months ago ten of the patients were reported as being well with little or no sign of disease. A comparison of the relative value in this field of radium and deep *x* rays shows no notable difference. Though the periods of observation are too short for conclusions as to technique and results, the authors think that they warrant radiation being offered to operable patients, to those who refuse operation, and to those patients for whom operation is inadvisable on account of age or some intercurrent affection.

398. Lipiodol in Skiagraphy and Treatment.

M. R. CASTEX, H. CARELLI, and H. GONZALEZ (*Bull. et Mém. Soc. Méd. des Hôp. de Paris*, February 18th, 1926, p. 217) refer to the great advances in the skiagraphy of internal organs and structures since the introduction of lipiodol. They have been very successful in studies of the respiratory tract, the nervous system, subphrenic abscess (suppurating hydatid cyst), and pericarditis with effusion. They find that lipiodol gives perfect contrasts in the skiagrams; it is quite harmless, even in large doses, and the technique is simple. It has been reported also that it has a definite therapeutic value when injected into a purulent pericarditis or an empyema. The authors give details of the case of a man, aged 24, who had a large pericardial effusion in which tubercle bacilli were found. Lipiodol was injected many times at intervals of from five to fifteen days, and skiagrams were taken in various positions. Although lipiodol was well tolerated, it did not retard the progress of the disease in this particular case.

399. M. R. CASTEX, N. ROMANO, and H. GONZALEZ (ibid., p. 222) describe a case of a suppurating hydatid cyst of liver in a man aged 45. The patient suffered from violent burning pains in the stomach and right hypochondrium, vomiting, and recurrent obstructive jaundice. An exploratory puncture yielded very offensive pus and gas, the latter under such tension that it forced back the piston and filled the exploring syringe. A skiagram showed a cavity below the right half of the diaphragm partially filled with fluid, which changed its position with the patient's movements. Lipiodol was injected into this cavity, and by reason of its greater density it gravitated to the lower part of the cyst, producing a deeper shadow than that of the pus, and thus indicating the lower limit of the cyst.

400. A. LEMAIRE (ibid., February 11th, 1926, p. 166) reports the case of a phthisical patient who developed tuberculous pericarditis in March, 1925. On puncture pus was found, which on injection infected a guinea-pig. Two injections of lipiodol were made intrapericardially with an interval of a fortnight between them. The cardiac symptoms improved and the pericardial effusion diminished so that no further paracentesis was necessary. In June, 1925, some cerebral symptoms developed (paralysis of the sixth nerve and slight right-sided hemiparesis). The pericardial condition remained quiescent until October, when a few cubic centimetres of pus were withdrawn from the pericardial sac and 5 c.cm. of lipiodol were then injected. The cerebral symptoms increased and the patient died on October 30th. At the autopsy tuberculous masses were found in the brain; the pericardium was slightly adherent and contained 50 c.cm. of creamy purulent fluid, the pericardium was notably thickened. The cause of death was cerebral tuberculosis. Lemaire considers that if the lipiodol did not cure the pericarditis it certainly delayed its progress.

401. X-Ray Treatment of Glandular Tuberculosis.

P. AMUNDSEN (*Norsk Mag. f. Laegevid.*, February, 1926, p. 119) made a careful examination of 150 persons who had undergone *x*-ray treatment for glandular tuberculosis in the Röntgen Institute at Oslo between the years 1915 and 1922 inclusive. The examination was made from two to nine years after termination of the treatment. The cases were divided into three groups. In the first group, which consisted of 32 patients with simple glandular enlargement, 26 (81 per cent.) were cured. In the second group, which comprised 65 patients with glandular enlargement associated with periadenitis, 32 (49 per cent.) were cured. In the third group, which consisted of 53 cases of suppurative adenitis with fistulae, 41 (77.4 per cent.) were cured. The proportion of recoveries in all three groups was thus 66 per cent. Recurrence was noted in 4 per cent., and skin changes, such as atrophy and telangiectases, were observed in 10 per cent. Amundsen is opposed to early *x*-ray therapy being continued for several years, as such treatment is likely to give rise to cutaneous lesions. Each series of irradiations should be distributed over a period of several days, and there should be an interval of from five to six weeks between the different series.

Obstetrics and Gynaecology.

402. Torsion of the Myomatous Uterus.

ACCORDING to E. HITZANIDÈS (*Gynécol. et Obstét.*, 1926, xiii, 2, p. 103) axial torsion of the myomatous uterus has been recorded in 85 cases; it is almost always from left to right, and the twist is most commonly through less than 180 degrees but may be as much as 360 degrees. The term "torsion of the uterus" is usually a misnomer, for it is in reality the upper portion of the tumour-bearing organ which rotates around a softened and lengthened supravaginal cervix. The tumour is usually large and heavy, but, as in a case recorded by the author, its weight may not exceed 1,250 grams. It seems to be about equally common to encounter a uterus of which the torsion is secondary to that of a pedunculated myoma and primary torsion of a uterus containing an interstitial myoma. Acute torsion is characterized clinically by

very sudden and violent pain, accompanied by pallor and collapse, with a pulse frequency of 130 to 160 and repeated vomiting; there is, however, little or no rise of temperature. Owing to the strong muscular resistance physical examination is difficult, but exploration of the fornices may serve to exclude haematocele from ruptured ectopic gestation. Slow torsion with no acute symptoms is not uncommon, and in a case recorded by the author the patient first sought advice on account of supposed pregnancy. In certain cases the torsion produces a haematometra and crises of pain occur at monthly intervals. Suppression of the menses in a young person and the impossibility of passing the uterine sound are important diagnostic signs; the hardness of the tumour may distinguish it from a twisted ovarian cyst, but the rotated myoma may be softened owing to oedema. The mortality is given as 63 per cent. in cases not operated on, and 8 per cent. after operation.

403. Treatment of Puerperal Fever.

A. ABELHEIM (*South African Med. Record*, February 13th, 1926, p. 50) considers that local treatment of early puerperal infection is apt to be harmful and that general infection cannot be prevented by local treatment after infection of the tissues or blood has occurred. Four days after confinement a wall of leucocytes protects all wounds in the genital canal, and careless examination, douching, or curetting may damage such a protection and allow streptococci to penetrate and set up a general infection. He deprecates uterine douching, since it will not wash away what is not loose or destroy organisms in the uterine tissues, and it often causes damage to the protective wall of leucocytes, thereby propagating infection; he also regards curetting as dangerous. He does not consider that there is danger of severe infection arising from the retention of a piece of placenta, and advocates such general lines of treatment as quinine, ergot, and drainage while awaiting spontaneous expulsion. Only in severe haemorrhage is he in favour of plugging the vagina or uterus daily until the temperature has been normal for a week, or until it is possible to remove the piece easily with forceps. Abelheim concludes that the best treatment is to interfere as little as possible, and he regards puerperal fever as affording a comparatively favourable prognosis if local treatment is avoided. As a prophylactic measure he advocates the injection of 50 c.cm. of antistreptococcus serum in all instrumental deliveries or those in which there has been any local manipulation.

404. Mural Salpingitis.

C. DANIEL (*Gynécol. et Obstét.*, 1926, xiii, 2, p. 81) states that the interstitial part of the Fallopian tube is normally 7 or 8 mm. long; it is lined by epithelium consisting of a single layer of ciliated columnar cells surrounded by a connective tissue stroma which is poor in cells. Inflammatory conditions extend to this region both downwards from the free portions of the Fallopian tubes and upwards from the uterus, so that pathological changes recognizable both by the naked eye and the microscope are present in the interstitial tube in 70 per cent. of cases of uterine and adnexal disease. In cases of simple salpingitis inflammatory lesions are recognizable in 95 per cent. of cases; the lumen of the interstitial tube is only very exceptionally obliterated, but a pressure of 200 to 250 mm. of mercury (compared with 60 to 100 mm. normally) is required to inject it from the uterus. In salpingitis the intrauterine opening of the tube is not as a rule discernible by the naked eye. In adnexal tuberculosis the interstitial tube always shows gross alterations, which according to microscopical examination appear to be the result of tuberculous lesions in only one-half of cases. In cases of large uterine myoma the interstitial canal can no longer be traced, microscopically or macroscopically. In cases of ovarian tumour and of cancer of the cervix the interstitial part of the tube is unaltered even in the presence of lesions of the extramural tube.

Pathology.

405. Preparation of Malarial Blood for Treatment of General Paralysis.

O. KAUDERS (*Biochim. e Terapia sperimentale*, January, 1926, p. 33) recommends the following methods for the conservation and transmission of blood taken from malarial patients that is to be used for the treatment of patients suffering from general paralysis. With aseptic precautions 5 c.cm. of the blood is removed from a vein in the arm during or just after the decline of a febrile paroxysm and collected in a sterile test tube containing 0.5 per cent. sodium citrate solution. The tube is covered with a rubber cap rendered airtight with paraffin; it is important that the fluid in the tube should not come into contact with the cap. Another 10 to 15 c.cm. of blood is withdrawn into a small sterile flask containing glass beads, which are then shaken thoroughly. The defibrinated blood is then poured on to the surface of a blood agar slope, taking care not to allow it to pass above the upper limit of the medium. The tube is capped and paraffined as before. A third amount of 2 c.cm. of blood is taken into a tube containing 10 c.cm. of melted gelatin at a temperature not above 30° C. The mixture is well shaken till the blood is evenly distributed; the gelatin is then allowed to set, either at room temperature or in the ice-chest, capping and paraffining as before. The infectivity of blood so preserved lasts for two days certainly, sometimes for three days, and occasionally for four days; the blood can be transported for long distances without mishap. For infecting the patient it is desirable to inject the three specimens of blood. The citrated blood is injected subcutaneously; the blood in the blood agar tube is decanted into a sterile vessel and injected; the blood in the gelatin tube is likewise injected subcutaneously after the mixture has been melted in a bath at 28° C.

406. Basal Metabolism in Artificial Pneumothorax.

N. SANTANGELO (*Il Morgagni*, February 21st, 1926, p. 225), using Zuntz-Geppert's apparatus with an open circuit, has measured the respiratory exchange and the basal metabolism of patients suffering from pulmonary tuberculosis on whom an artificial pneumothorax had been performed. In the cases that were doing well the basal metabolism was found to be about 15 per cent. below normal; in the cases that were doing badly, or in which there was still slight fever or dyspnoea, it was normal or increased. In one case in which a fresh focus of tubercle had appeared, accompanied by fever, cough, and loss of weight, the basal metabolism was increased 15 per cent. above normal. Measurements were made in one patient just before and a quarter of an hour after the induction of artificial pneumothorax; the second figure was 5 per cent. below the first; the absolute measurements were 35 per cent. and 30 per cent. above normal. It is evident that in favourable cases the basal metabolism becomes subnormal. Parisot and Hermann found that the effect of performing artificial pneumothorax on healthy rabbits was to double the respiratory activity, to prevent further growth in young animals, and to lead to a loss of weight in adult animals; this was clearly due to an increase in oxidation. But in human tuberculous patients the reverse is found. The respiratory activity is diminished and the weight increases; oxidation is diminished. The author believes that this difference is explained by the suppression in human patients of the tuberculous focus and the shutting off thus from the circulation of the toxic substances that formerly stimulated katabolism. He concludes that the diminution in basal metabolism in pneumothorax patients is due far more to this factor than to the mechanical decrease of respiratory surface.

407. The Antirachitic Value of Fresh Spinach.

HARRIETTE CHICK and MARGARET H. ROSCOE (*Biochem. Journ.*, 1926, vol. xx, No. I, p. 137) have investigated the antirachitic value of fresh spinach leaves. Young rats, about 3 weeks old, were placed upon diets devoid of fat-soluble vitamins, but containing adequate contents of calcium and phosphorus salts. Some of these animals received a daily ration of spinach; others received the basal diet without spinach. The increase in weight during the next six weeks was taken as an indication of the amount of vitamin A in the spinach, and the degree of calcification of the bones at the end of this time provided a measure of the calcium-depositing power or vitamin D content of the spinach. The spinach was grown in the open at different times of the year—winter, spring, midsummer, and autumn—to test the effect of the sun's rays on the antirachitic content. The results showed that fresh spinach leaves contain a large quantity of vitamin A, but that, with the exception of spinach grown in midsummer, they contain no detectable vitamin D; the midsummer spinach contained a small but appreciable quantity. On the other hand, spinach that was irradiated for thirty minutes at a distance of 36 cm. from a quartz mercury vapour lamp just prior to consumption was found to be powerfully antirachitic. The authors suggest that in spinach grown in the open the vitamin D may be removed or destroyed shortly after formation, whereas in spinach that has been cut before ultra-violet irradiation no such change can occur. MARGARET A. BOAS (ibid., p. 153) also contributes an article on the antirachitic value of fresh spinach, with particular reference to its effect on the retention of calcium and phosphorus by young rats. The conclusions reached are similar to those of Chick and Roscoe. Fresh spinach was found to contain ample vitamin A but a negligible quantity of vitamin D. Cod-liver oil, on the other hand, contained both the A and the D vitamins. Both cod-liver oil and spinach increased the amount of phosphorus excreted in the urine at the expense of that excreted in the faeces; but it is pointed out that the ability to do this is no measure of the antirachitic power.

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

408. Spasmophilia.

G. MOURIQUAND and P. BERTOYE (*Journ. de Méd. de Lyon*, February 20th, 1926, p. 85) define spasmophilia as an increased excitability of the peripheral nervous system causing tonic or, less frequently, clonic convulsions of the muscles and associated with a deficiency of calcium in the system. Of its physical signs, that of Chvostek is very important, though difficult to elicit from infants. Contraction of the muscles supplied by the facial nerve follows percussion of the mid-point of a line joining the zygomatic process and the corresponding angle of the mouth. In infants Lust's sign is useful; percussion a little below the middle of the calf results in the foot jerking upwards and outwards. The clinical manifestations are laryngeal spasm, latent or manifest tetany, and convulsions; insomnia occurs often and may be the only symptom. Predisposing causes of spasmophilia are faulty feeding, rickets, bad hygiene from want of sunshine, and congenital syphilis. Heliotherapy and dietary measures are the most essential points in treatment; the authors recommend large doses of calcium chloride combined with cod-liver oil and phosphorus to reduce the spasms. Ultra-violet rays have also been found valuable.

409. W. STOELTZNER (*Med. Klin.*, March 5th, 1926, p. 357), in discussing the etiology of spasmophilia, does not think that epilepsy is to be considered a sequel of this disease, but that mental weakness, showing itself in stammering, tics, and bed-wetting, may follow. Prophylaxis, being the avoidance of rickets, is best secured by breast-feeding. Treatment in doubtful cases consists in reducing the cow's milk in the diet by about one-half; in definite cases cow's milk should be eliminated entirely for at least a fortnight. The child must, however, not be fed only on carbohydrates during this time, but substitutes for the albumin, fats, and minerals must be given in the form of eggs, finely shredded meat, broth, rusks, butter, vegetables, and fruit. This treatment will as a rule clear up the symptoms at once, but it must be remembered that even one drink of milk may bring them on again. In all cases cod-liver oil should be given, with or without phosphorus, and continued for months after the symptoms have disappeared. In obstinate cases accompanied by laryngospasm calcium should be given. The author recommends the subcutaneous injection of magnesium sulphate, 0.2 gram per kilo of body weight in 8 per cent. solution, as being often successful in cases of prolonged spasm. If a child with spasmophilia develops an acute infection meningeal symptoms often follow, and the cerebro-spinal fluid is under pressure. Lumbar puncture gives good results.

410. Cardiac Asthma.

S. WASSERMANN (*Wien. Arch. f. inn. Med.*, January 5th, 1926) summarizes the literature of cardiac asthma and records a number of original observations. He concludes that asthma may occur in the course of dilatation of either side of the heart; dilatation of the left side produces typical cardiac asthma, while that of the right side causes pseudo-asthmatic attacks. Typical cardiac asthma is an acute paroxysm of dyspnoea, induced by derangement of the general circulation, involving especially the brain and medulla. Dyspnoea may be due to anoxaemia of the respiratory centre; this in its turn is due to enfeebled contractions of the left ventricle, while cardiac back pressure produces pulmonary congestion. Physiologically, cardiac asthma is the reaction of the central nervous system and especially of the medulla. It is a sudden "defence reaction" produced by anoxaemia of the respiratory centre, and also by the dyspnoea due to pulmonary congestion. The subjective symptoms result from the mental correlation of the arterio-anoxaemic dyspnoea, and include a group of centrally perceived symptoms of air-hunger—namely, motor and psychomotor disturbance, restlessness and sudden impulses, with respiratory anxiety and a sensation of suffocation. The objective symptoms include all the results of stimulation of the various bulbo-spinal nerve centres by the cardiac asthmatic dyspnoea—deep, occasionally laboured respiration, the accessory respiratory muscles being called into action. The vegetative nervous system is stimulated and produces somato-visceral symptoms—pulmonary congestion, bronchial spasm, difficult and scanty expectoration, bradycardia, palpitation, pharyngo-oesophageal spasm, nausea, rectal tenesmus, dysuria, and frequent micturition. The blood pressure sometimes rises rapidly. Cardiac asthma may be induced by aortic valvular incompetence, coronary end-arteritis or thrombosis, or an infarct in the left ventricle. The prognosis is extremely grave. Usually there is spontaneous recurrence with exhaustion of the respiratory centre, Cheyne-Stokes respiration, cardiac failure, and pulmonary congestion. The treatment is purely symptomatic, and includes morphine, carbon dioxide, and vaso-dilators, such as trinitrin. In pulmonary circulatory or congestive asthma dyspnoeic attacks occur owing to the increasing failure of the pulmonary circulation, with cyanosis, dyspnoea (orthopnoea), and anasarca. Little or no increase of blood pressure occurs, but the clinical signs are those of mitral disease with progressive heart failure. Treatment includes bleeding, cardiac tonics, such as digitalis, caffeine, morphine (administered very cautiously, in minimal doses) and carbon dioxide. The prognosis is very bad and the condition is usually a terminal manifestation.

411. Erythema Arthriticum Epidemicum.

E. H. PLACE, L. E. SUTTON, JUN., and O. WILLNER (*Boston Med. and Surg. Journ.*, February 18th, 1926, p. 285) issue a preliminary report upon an epidemic, the dominating picture of which was acute sudden onset with fever, vomiting, malaise, and headache. From the first to the third day a blotchy morbilliform eruption appeared, mainly about the joints and extensor surfaces of the extremities, accompanied by a multiple arthritis, often severe in degree. During the latter half of January, 1926, 45 cases were studied. Petechial haemorrhages were frequently noted on the dorsum of the feet, on the toes and soles, many days after the eruption had faded from the arms and hands, and desquamation, occasionally profuse on the backs of the hands and wrists, sometimes followed. Involvement of two or more of the large joints usually appeared on the third day and was often exceedingly painful and crippling, with fluid in the knee-joint in at least six cases. In two cases a slightly flocculent yellow fluid was obtained from the joints from which a Gram-negative rod-shaped organism was cultivated, and a similar organism was isolated from the blood in ten out of twelve cultures. In many cases the throat showed a diffuse dull redness extending over the soft palate. The heart was normal in all the patients except one, who had an old endocarditis; there was never any glandular enlargement, and in only one case was the spleen palpable. The epidemic was confined to a small locality about half a mile in length along the river; though the milk supply was suspected nothing was found to indicate disease in any of the dairies, and samples were bacteriologically negative. The age incidence varied from 8 months to 50 years, the 8 months baby being the only case suggesting contagion and known not to have consumed the milk. The association with the milk supply, the arthritis, eruption, toxic symptoms, and irregular fever closely simulated Malta fever. Further studies upon the organism isolated are to be reported later.

412. Visceral Leishmaniasis in Spain.

G. PITTALUGA (*Rev. med. de Barcelona*, January, 1926, p. 42) states that since 1912 more than 300 cases of infantile kala-azar or visceral leishmaniasis have been observed in Spain. His personal experience and the data collected by his collaborators and pupils as well as by pediatrists show that an endemic of visceral leishmaniasis exists in Spain and even throughout the Iberian peninsula. The endemic is far from being confined to the sea coast, as more than a hundred autochthonous cases have occurred in the central and western provinces of Spain, such as Madrid, Toledo, and Caceres. The northern provinces, however, have hitherto escaped. In spite of the predominance of these cases in early life (from a few months to 10 or 12 years of age), a large number have been found in adolescents and adults. The term "visceral leishmaniasis" is therefore preferable to that of "infantile kala-azar." Of 364 cases 43 per cent. occurred in males and 57 per cent. in females. The great majority of the children affected belong to poor families; a fair number of cases, however, are found in well-to-do and even prosperous families. Defective hygienic conditions are all-important factors in the spread of the disease. Until a few years ago only very severe cases of advanced leishmaniasis were seen. Pittaluga, however, has for some time maintained that there are numerous mild cases of infantile kala-azar of slow course, in which the diagnosis can only be made by bacteriological examination of the spleen. The actual prevalence of visceral leishmaniasis

is probably much greater than is supposed, and a certain number at least of the cases of anaemia, pseudo-leukaemia, splenomegalic anaemia, and marasmus which are assigned as causes of infantile mortality are really examples of leishmaniasis. Treatment by preparations of antimony, especially by the double tartrate of antimony, and potassium or sodium is said to be very effective.

413. Combined Schick Test and Diphtheria Prophylactic.

A. T. GLENNY and HILDA WADDINGTON (*Journ. Path. and Bact.*, January, 1926, p. 118) remark that the Schick dose of toxin has a small immunizing effect upon animals already immune, but its antigenic value as a primary stimulus is negligible. A preparation that would give a satisfactory Schick reaction and at the same time act as an immunizing agent would have a distinct advantage as it would reduce the number of subsequent prophylactic injections from three to two. It would also act as the commencement of a second course of immunization in the small number of children who, tested after a first series of inoculations, continue to be Schick-positive. As the result of a number of experiments during the last few years Glenny and Waddington have been able to produce a combined diagnostic and prophylactic agent containing the equivalent of 1/10 L+T.A.M. in 0.2 c.cm. —that is, equivalent to the amount in 1 c.cm. of the ordinary prophylactic toxin-antitoxin mixture, and also corresponding in diagnostic value to a Schick toxin. Tests are as yet incomplete, but the work is being continued. Probably the chief difficulty will be the increased number of pseudo-reactions, but this can be overcome by making the mixtures more dilute. The authors have also been making clinical trials with a combined diphtheria-scarlet fever prophylactic, in which the proportions of the two constituents are so arranged that the amount of scarlet fever toxin does not depress the immunizing efficiency of the diphtheria toxoid present.

414. Koplik's Spots.

G. PETÉNYI (*Monatsschr. f. Kinderheilk.*, February, 1926, p. 533) states that though Koplik's spots are generally regarded as diagnostic of measles, some cases are on record of their occurrence in other diseases. Thus Asa-Falk reported three cases in which they were found in children with influenza, and similar cases were described by Manasse, Müller, and Widowitz. Petényi now records three cases of exanthema subitum showing Koplik's spots. Measles could be excluded, and in two of the cases had occurred several years previously. He concludes that Koplik's spots are a non-specific phenomenon and may occur in other diseases besides measles.

Surgery.

415. Perineal Prostatectomy.

P. SYMS (*Journ. Amer. Med. Assoc.*, January 23rd, 1926, p. 244) records the result of twenty-five years' experience with his own technique of perineal prostatectomy, which he claims to be simple, without danger to the rectum, and affording ample exposure. Under sacral anaesthesia a Little's lithotomy staff is introduced into the bladder with the patient in the lithotomy position. Through a median incision extending from just behind the bulb to a point just in front of the rectum the membranous urethra is opened to the apex of the prostate with a narrow scalpel in the groove of the staff, and the prostatic urethra is dilated by passing the index finger into the bladder. A Young's tractor having been introduced into the bladder, all the tissues overlying the rectum are pushed back by blunt dissection, exposing the dome-shaped sheath of the prostate, through which a vertical incision is made on each side of the middle line, exposing the prostatic lobes. These are enucleated through the vertical openings, care being taken to work close to the lobes so as not to tear the sheath containing the venous plexus. After exploring the bladder with the finger for intravesical lobes a catheter is introduced through the open urethra and a light gauze packing inserted into the spaces left by the lobes. The catheter is temporarily secured to the upper part of the wound by a silkworm-gut suture, and a single suture, tied loosely, is placed near the middle of the wound. Syms reports 198 consecutive cases without a death, and claims that the final functional results are as good as, or better than, those following the suprapubic operation, while convalescence is much shorter and more comfortable. The patients are able to get up within forty-eight hours, regaining bladder control, and being able to get about in comfort within a week.

416. Surgical Treatment of Acute Pericarditis.

M. DUGUET (*Bull. et Mém. Soc. Nat. de Chir.*, January 16th, 1926, p. 4) records the case of a patient with acute pericarditis of about six weeks' duration. Radiographic examination showed marked enlargement of the pericardial shadow. It was decided to open the pericardium and evacuate the fluid. This was accomplished under local anaesthesia after resection of portions of the fifth, sixth, and seventh costal cartilages. The pericardium was incised (it was found roughened with sero-fibrinous exudate) and about half a litre of fluid was evacuated. The wound was then closed in layers without drainage. The patient made satisfactory progress for nine days, when the fluid reappeared in the pericardium and discharged spontaneously through the scar. A fistula resulted which became infected and resulted in the death of the patient. Duguet thinks that the operation was delayed too long, and that for success it should be performed earlier. In view of the risk of infection drainage is strongly contra-indicated in such cases. The fluid removed in this case was sterile on culture and showed no tubercle bacilli present; inoculation tests were negative. The author believes that in spite of the absence of organisms the disease was probably tuberculous in origin, as this is the more frequent cause in young subjects. He adds that the case emphasizes the importance of early operation.

417. Recurrent Pain after Operations on the Biliary Tract.

H. FLÖRCKEN (*Deut. Zeit. f. Chir.*, January, 1926, p. 181) states that the primary mortality in 552 operations on the biliary tract at St. Mary's Hospital at Frankfort was 4.5 per cent., and in uncomplicated cholecystectomies 1.8 per cent. Of 329 patients investigated after their discharge from hospital 72.6 per cent. showed no symptoms, 16.5 per cent. had only slight symptoms, and 8.2 per cent. were not relieved. Of 273 patients with gall stones 75.9 per cent. were freed from all their symptoms, 15 per cent. had only slight symptoms, and 6.5 per cent. were not relieved. The cause of the symptoms was mainly a residual cholangitis. Of 56 patients who had suffered from chronic cholecystitis, peri-cholecystitis, or congestion of the gall bladder apart from calculi, 58.9 per cent. were completely cured, 23.7 per cent. had only slight symptoms, and 16 per cent. were not relieved. The cause of the symptoms in these cases was usually an ulcer or splanchnoptosis. Many of the milder symptoms which lasted two years after operation subsided spontaneously and complete recovery took place. The best results were obtained in simple cholecystectomy without complications, 80 per cent. of the patients being completely cured of all their symptoms. In 54 cases of choledocho-duodenostomy the mortality was 3.7 per cent., the results being very good in 71 per cent. and satisfactory in 17.8 per cent. Successful treatment of the recurrent pain following operation depends on the cause. Residual cholangitis is often improved or cured by repeated duodenal intubation with injection of magnesium sulphate. In cases showing Head's areas paravertebral injection of novocain, tutocain, or dolantin, as recommended by Läwen, is indicated.

418. Nephrectomy for Renal Tuberculosis.

CONDAMIN (*Journ. d'Urol.*, January, 1926, p. 31) points out that the results of removal of the kidney for unilateral renal tuberculosis are extremely good. Statistics show a steady improvement owing to better technique, earlier diagnosis, and estimation of the functional value of the kidneys. The operative mortality has fallen from 25 to 4 or 5 per cent., and continuous series of thirty to forty nephrectomies without a death are recorded. The ultimate results, however, are clouded by a mortality which is usually the result of a tuberculous lesion elsewhere in the body. The late results show a mortality of 31 per cent. in three years and 14 per cent. in seven years. The majority of patients with renal tuberculosis have tuberculous affections elsewhere, either in the lungs, genital tract, or joints, and this ultimately causes their death. When the disease is entirely confined to the kidney Condamin finds that 62 per cent. of patients are finally and completely cured. When there exists in addition an extrarenal focus of tuberculous disease there were only 47 per cent. of ultimate cures. The prognosis is not so good in a patient giving a history of antecedent tuberculosis. Tuberculosis elsewhere in the genital tract rather increases the operative mortality, whereas urinary tuberculosis does not appear to influence the prognosis to any degree. Lesions coexisting in the lungs show the highest mortality and increase the gravity of the ultimate result. Extrarenal tuberculosis, then, appears to influence the prognosis after removal of the kidney, and in some cases may lead to infection of the remaining kidney. Lung infection is the most serious condition, whilst genital tuberculosis may delay recovery.

419. Fractures of the Head and Neck of the Radius.

C. W. CUTLER, JUN. (*Annals of Surgery*, February, 1926, p. 267), points out the importance of these fractures, as they not infrequently cause permanent disablement of the elbow-joint. In fifty collected cases the incidence was about equal in the sexes; they are not common in children. Falls on the elbow were responsible for 40 per cent. of the cases. The degree of injury ranged from a simple crack in the head of the radius to splitting of the head into two or more pieces. Six of the cases were complicated with a dislocation or fracture of the upper end of the ulna. The symptoms were uniformly pain in the elbow and some form of disability. Swelling was present in about two-thirds of the patients. The diagnosis rests on the history of a fall, followed by limitation of movement and pain in the elbow-joint; the *x*-ray picture is confirmatory. The prognosis depends on the severity of the injury and the question of proper treatment; in simple cases flexion and supination has given satisfactory results. In fragmentation Cutler thinks it is probably wiser to excise the fragments, as full and useful function of the arm is not otherwise obtained. If flexion and supination can be secured union and restoration of function are possible. It appears to be best to treat these cases without operation in the first place unless definite indications for removal of the fragments are present. Recourse can be had to operation later if conservative treatment fails.

420. Parabiliary Stenosis.

UNDER this title N. LAGRAVINESE (*Il Policlinico*, January 15th, 1926, p. 13) reports five cases, with radiograms, illustrating certain changes occurring in the colon and duodenum as a result of operation. These changes are due sometimes to a periduodenitis contracting and deforming the duodenum. One patient was a man who had been operated upon two years previously for gall stones, a cholecystectomy being performed. Two months later he began to suffer severe pain three or four hours after food, which was ascribed to fresh gall stones; but there was no evidence of this, and eventually he was treated as a neurotic and became a morphine addict, passing from one clinic to another. As haematin was found in the faeces, a final diagnosis of duodenal ulcer was made and laparotomy was performed. No trace of ulcer was found, but adhesions and marked periduodenitis was noted; the adhesions were freed and a posterior anastomosis was performed. After this the patient made a rapid recovery and had no more trouble. The four other cases illustrate various types of periduodenitis and serve to draw attention to the condition which is sometimes congenital in origin. The author adds a bibliography of recent literature on the subject.

Therapeutics.

421. Radium Therapy in Tumours of the Naso-pharynx.

SARGNON (*Arch. Internat. de Laryngol., Otol. et Rhinol.*, January, 1926, p. 38) points out that there occur in the naso-pharynx true fibromas, malignant tumours outwardly resembling fibromas, and diffuse malignant tumours which arise and are restricted to the lateral wall of the naso-pharynx—the peritubal growths. The malignant tumours may be sarcomata or epitheliomata, but only the latter ever cause secondary glandular involvement. Among the objections to surgical measures is the tendency to haemorrhage, which may require a laryngotomy and a primary or a secondary ligature of the external carotid artery. Complete removal of the growth is difficult and the packing of the naso-pharynx is always likely to cause otitic trouble. Secondary haemorrhage is not a rare complication, and is usually very severe. Recurrence is frequent and often causes death from cachexia before there is any appreciable tumour formation. Any second intervention is still more difficult, and the bleeding is even more copious than on the first occasion. For these reasons the author has given up surgical measures and has employed radium. When this substance is used in association with operation through the mouth or nasal passages the tubes are applied by inserting them in the post-nasal packing and removing them together. If the operation has been by the lateral nasal route the tubes are easily placed against the area of detachment of the growth and can be removed at any time by the nasal passages. Radium can be employed before an operation and lessens the amount of haemorrhage at the operation; it may be applied in tubes or in needles. The ideal procedure is to introduce the radium carrier into the tumour itself, but this is often very difficult owing to the hardness of the tumour and its tendency to bleed on handling. The needles are best fixed into the growth through the nose under visual control by posterior rhinoscopy and are then safely retained; if placed in the tumour through the mouth there is risk of their coming loose and being swallowed. The author introduces a sound through the nose, followed by a thread which passes out through the mouth, and is tied to form an endless thread. On to this he fixes tubes of radium and draws them into position so that one is in the naso-pharynx and the other is in the posterior part of the nasal passage. A little packing is placed in position to steady the tubes and to control any slight haemorrhage. Removal of the radium is not followed by haemorrhage, as the salt has a sclerosing action on the blood vessels. Doses of 50 or 100 millicuries are employed. In cases of epithelioma, and especially where there is glandular enlargement, a collar of radium is applied to the neck and lower part of the face, about twenty tubes being used. The result of this form of treatment is that the patient has no more bleeding and the tumour gradually shrinks, taking several months to disappear. The disagreeable results may be perforation of the palate, which may be closed by a dental plate, and necrosis of the posterior part of the vomer, which causes little inconvenience except a rather fetid discharge.

422. Serum Treatment of Spirochaetosis Icterohaemorrhagica and Acute Poliomyelitis.

A. PETTIT (*Progrès méd.*, February 20th, 1926, p. 279) states that in Japan the mortality from spirochaetosis icterohaemorrhagica is 95 per cent., as compared with about 5 per cent. in France. The difference in the rates is to be attributed to the fact that only the severe cases are diagnosed in Japan, whereas in France all forms of disease, including a large proportion of mild cases, are diagnosed. In France, therefore, serum treatment has only a limited application in spirochaetosis icterohaemorrhagica, being merely required for severe cases. Its effect is to inhibit the multiplication of the spirochaetes, though it is not so active as could be desired, and the recurrence of the fever is not prevented. The serum also furthers elimination of the spirochaetes and the duration of spirochaeturia is shortened. The jaundice, on the other hand, is hardly at all affected, for the blood corpuscles are destroyed. The haemorrhage, however, is checked, the intoxication is diminished, and the prostration becomes much less. Lastly, the blood pressure rises, headache diminishes, and convalescence takes place much more rapidly than in untreated cases. The administration of the serum is modelled on that of other serums. The serum should be given as soon as possible, the daily dose for an adult of 70 kilograms being 60 c.cm. for three to five days. In poliomyelitis the serum, generally speaking, is indicated only in the acute stage and should be given very early. It should be injected intraspinally in doses of 10 c.cm. after removal of the corresponding amount of cerebro-spinal fluid. If the patient's condition continues to be alarming, a second, third, and even fourth injection will be required. The action of the serum is as follows. It inhibits the advance of poliomyelitis, and in bulbar disturbances the respiration rapidly becomes normal after injection of serum. Moreover, the lesions of the cells are brought to a standstill and convalescence is more rapid than in untreated cases.

423. Treatment of Tuberculosis by Sanocrysin.

V. BIE (*Acta Medica Scandinavica*, February 11th, 1926, p. 220) describes the results of his treatment with sanocrysin of cases of acute febrile tuberculosis. Some patients received in addition intramuscular injections of the special serum, and others intramuscular and intravenous injections. Adult patients were usually given doses of 0.25, 0.50, 0.75 gram, and four doses of 1 gram, at intervals of at least five days, to a total for each series of 5.25 to 5.50 grams. Children received doses, in a similar progression, of 1/2 to 2 cg. per kilogram of body weight. Bie introduced an interval of three to four weeks between the series of injections. Most of his patients vomited after injections of sanocrysin, but not to any serious extent. He considers the exanthem phase an indication for intermitting treatment, but not albuminuria in acute tubercle, since he has found that such albuminuria disappears with the termination of the course. He found that in chronic phthisis albuminuria might be set up with small doses of sanocrysin and was apt to persist; injections of serum neither prevented the appearance of albuminuria nor cured the condition. He records the case of a girl, aged 6, with acute tuberculous pleurisy. After injections of 0.75 and 1 gram of sanocrysin the temperature fell rapidly, and he gave an injection of serum on each occasion from fear of a collapse. With further experience he doubts if the serum was necessary. A second course of injections followed four weeks after the first, but without serum. Nine months after the commencement of treatment radiograms showed no signs of tubercle. A boy, aged 15, with signs of a lobar pneumonia of the right lower lobe and tubercle bacilli in the sputum, received serum injections with the first and third injections of sanocrysin, an intramuscular injection on the following day, and an intravenous injection with the

sanocrysin. The patient tolerated the second intravenous injection of serum well in spite of the short interval between it and the first injection, and the consequent risk of anaphylaxis. Bie does not, however, recommend such a procedure as a routine, and notes that his attempts at desensitization have failed. The patient had a full second course of sanocrysin and a third, both without serum. A short fourth course was given before the patient, nine months after the commencement of treatment, was well enough to be sent to a sanatorium with a normal temperature and slight expectoration, which, however, still contained tubercle bacilli. He quotes three more cases of females, aged 24, 21, and 16 respectively, the first two with tuberculous pleurisy, and the last with pulmonary tuberculosis; all responded well to treatment with sanocrysin. The last two patients had no serum.

424. Intravenous Sulpharsphenamine in Syphilis.

M. F. LAUTMAN (*Arch. Derm. and Syph.*, February, 1926, p. 234) states that the ill effects and sensations resulting from the injection of neo-arsphenamine and arsphenamine tend to prevent some patients from continuing the course of treatment. He has therefore made use of sulpharsphenamine, which, though not so efficient as the older arsenicals, is less noxious, does not give rise to dermatitis, and produces practically no constitutional reactions. The cases which he selected for treatment were those in which a negative Wassermann reaction had been obtained by previous treatment with other drugs, and therefore a less potent preparation was able to maintain the improved condition. More than four hundred injections of sulpharsphenamine were given by him to eighty-three of these patients, and in all of them the results were fully as good as those obtained by the older arsenicals. The drug was dissolved in 30 c.cm. of distilled water and injected into a vein. It was readily soluble and caused but little irritation if any of the solution leaked into the subcutaneous tissue; no tendency to thrombosis was observed. The first dose given was 0.4 gram, followed by seven subsequent ones of 0.6 gram, given every fourth day. These injections were combined with a similar number of 0.01 to 0.016 gram of mercury oxycyanate. Lautman has found this treatment particularly efficacious in neural syphilis, of which there were twenty-three cases in his series; the results were superior to those usually obtained with the other preparations. In those cases in which severe lancinating pains were present a distinct increase in the severity was observed immediately after an injection; the pain continued for about thirty-six hours and then subsided, becoming less than before the treatment. It is suggested that this increase in pain was due to the selective action on the nerve roots which sulpharsphenamine is said to possess.

Disease in Childhood.

425. Infant Feeding.

H. B. SHEFFIELD (*Med. Journ. and Record*, January 20th, 1926, p. 106), in discussing the difficulties of maternal nursing, states that the common practice of giving food to babies every three or four hours for exactly twenty minutes at a time, and waking the baby for this purpose, is to be condemned. This method only too often leads to painful and cracked nipples, with the possibility of breast abscess, in the mother, and to dyspepsia, insomnia, and excessive irritability in the baby. He suggests that the latter condition may, indeed, act as a primary cause of spasmodic pyloric stenosis, since this affection is more common in breast-fed babies. He proposes that the child should be fed at each breast alternately from five to ten minutes at a time every three or four hours when awake, and should not be awakened at specified times. If the breast milk agrees with the baby it usually suckles for about five to ten minutes and then falls asleep at the breast. Referring to the general opinion that breast-fed babies are more immune to infectious diseases than are bottle-fed babies, Sheffield reports that he has observed more cases of whooping-cough in the newly born and young breast-fed infants than in those who were bottle-fed.

426. Infantile Acetonaemia.

H. MEMBRAT (*Journ. de Méd. de Bordeaux et du Sud-Ouest*, February 10th, 1926, p. 102) states that cyclic, periodic, persistent, and recurrent vomiting, with acetonaemia, form a morbid entity in infants and children. Marfan has described it as an infantile disease characterized by attacks of vomiting, the elimination of acetone and of ketone bodies in the urine and expired air, usually occurring in healthy subjects, lasting for a few hours or days, and ceasing suddenly, to give place to perfect food tolerance. The attacks commence usually between the ages of 1 and 10 years, but cases occurring within the first year of life have been recorded. The disease is frequently familial and hereditary, and occurs more often in boys and among town-dwellers, particularly among children of the professional classes. It may be induced by dentition, overstudy, dietary faults, and by acute febrile diseases. An attack may occur suddenly, but more frequently it is preceded by headache, lassitude, constipation, and anorexia. During the attack there is an odour of acetone in the breath, the patient is pale and prostrate, the skin dry and parchment-like; it may be followed by jaundice. The prognosis is usually good, but some fatal cases have been recorded; in these there was fatty degeneration of the liver and subacute nephritis. Many theories of the origin of acetonaemia have been advanced, ranging from hysteria to anaphylaxis, but it would appear that the liver is the source of acetone and ketone bodies. Mellanby suggests that acetonaemia is due to intestinal toxaemia. An attack may be ushered in by severe headache and recurrent vomiting of the cerebral type, sometimes followed by epileptiform convulsions, rapid wasting, somnolence, and torpor; obstinate constipation completes the "meningitic tripod." Rigidity of the neck, severe headache, photophobia, and Kernig's sign are seen occasionally: it must not be forgotten that these may be due to cerebro-spinal or tuberculous meningitis. Epidemic encephalitis may be simulated by the lethargic type, although its onset is usually more gradual and the vomiting less severe; acetonaemia is absent. Lumbar puncture may be necessary to distinguish acetonaemia from meningitis. Careful clinical examination is required, especially of the urine for acetone and for diacetic and β-oxybutyric acids. The early appearance of acetonuria in cases of recurrent vomiting is a valuable aid to differential diagnosis. The majority of French authors state that lymphocytosis is found in acetonaemia, as well as in tuberculous meningitis, epidemic encephalitis, and cerebral syphilis. Finally, examination of the cerebro-spinal fluid for acetone may be required for differential diagnosis. It is probable that a certain number of reported cures of tuberculous meningitis were actually cases of acetonaemia.

427. Acute Nephritis in Children.

R. SOUTHBY and B. L. STANTON (*Med. Journ. of Australia*, January 30th, 1926, p. 127) examined the clinical histories of 103 children suffering from acute nephritis, with special reference to renal efficiency tests. They found that cases with sudden onset, and especially if there was an obvious source of infection, such as tonsillitis, impetigo, pneumonia, and measles, usually ran a short sharp course with complete recovery without any late results, while those with insidious onset without ascertainable cause often ran a protracted course ending in chronic invalidism. The urea concentration test proved to be of considerable value as an aid to prognosis, but the blood urea and urinary diastase estimations were of no assistance. Of 83 patients the urea concentration test indicated an unimpaired renal efficiency in 69, and all of these were found later to be clinically well and the urine free from albumin, casts, and red blood cells. Red blood cells alone are often found in the urine in the early stages, and also when the acute inflammation is subsiding, the casts and other cellular material having disappeared. The authors consider that diet is unimportant in influencing the duration of the illness, but that complete rest is essential. They found that the oedema responded fairly rapidly to pulv. jalapae co. and saline purgatives, or, in more obstinate cases, to potassium citrate, theocin sodium acetate, or Guy's pill, while hot packs and hot baths were valuable aids. Uraemic convulsions responded at once to venesection or lumbar puncture. In their opinion decapsulation is of little use and is rarely if ever justified.

428. Tuberculous Disease of the Wrist in Children.

E. SORREL (*Bull. et Mém. Soc. Nat. de Chir.*, February 6th, 1926, p. 86) states that in localized tuberculosis of the wrist-joint in children recovery may follow, with complete range of movement. He describes the case of a child, aged 10, in which this occurred. Even in the presence of abscess and fistula the condition may completely clear up in children. Six other cases are also mentioned, all of which had a satisfactory termination. This condition is not at all uncommon, and when there has been prolonged suppuration the surgeon may be tempted to excise the wrist-joint. In some cases this may be justifiable, but Sorrel maintains that in the localized form it is never necessary to perform a resection. The localized carpal tuberculosis of early life does not appear in adults, in whom the infection spreads to all the small joints of the carpus, and usually ends in ankylosis; or resection may become necessary. Radiograms and photographs illustrate the good results that have been obtained by conservative treatment in children.

Obstetrics and Gynaecology.

429. The Scar after Cervical Caesarean Section.

M. WETTERWALD (*Zentralbl. f. Gynäk.*, March 6th, 1926, p. 592) thinks that rupture of the scar of a Caesarean section is much less likely to occur in labours following a cervical than a corporeal (classical) Caesarean incision. According to Eardley Holland's collected statistics, the proportion of ruptures of the scar after high Caesarean section is as great as 25 per cent. in subsequent spontaneous births; Wetterwald's statistics from the St. Gallen Kantons-spital show that the proportion after the cervical operation is 3 per cent. If the percentages of rupture are reckoned as following Caesarean operations and not subsequent labours, the figures are from 1 to 4 per cent. for the high and, at the most, 0.28 per cent. for the low operation. Wetterwald has found in the literature records of 3,600 transperitoneal cervical Caesarean sections with only 10 recorded cases of rupture, during labour, of the scar, and 3 records of rupture of the uterus elsewhere. It is to be noted that in some of these 10 cases the accident cannot be attributed certainly or exclusively to diminished resistance in the cervical scar. In some the body also was torn at the time of rupture; in some the incision was lacerated during extraction of the foetus at the first operation; and in several the second pregnancy was accompanied by placenta praevia, in which erosion by chorionic cells possibly contributed to the yielding of the cervical scar. Wetterwald records a personal case—the only one, he thinks, in which the rupture of the uterus has concerned the cervix only with normal placental insertion. The Caesarean operation for persistent mento-posterior presentation was followed by an afebrile convalescence, and the rupture occurred at term (five years later) when the second stage of labour had been almost completed; the patient died after supravaginal hysterectomy. The author's clinic has recorded, after 100 cases of cervical Caesarean section without sterilization, labour in 45 patients, with 40 births *per vias naturales* among 26 women, and only one case of abnormal third stage of labour in the majority of the 13 repeated cervical sections the scar was unrecognizable, and in none were adhesions present. In spite of the favourable expectation in pregnancy following cervical Caesarean section, it is essential that the patient be kept under close medical supervision during both pregnancy and labour.

430. Induction of Labour by Pituitrin.

M. H. G. A. THOLEN (*Nederl. Tijdsch. v. Geneesk.*, February 6th, 1926, p. 526) states that A. Stern in 1920 drew attention to the value of the administration of castor oil by mouth, followed by intramuscular injections of very small quantities of pituitrin, for inducing labour in women at or beyond full term. Tholen employs the following method in his clinic at the Hague. The patient is given two spoonfuls of castor oil and two hours later 0.1 c.cm. of pituitrin intramuscularly. The injections are repeated hourly until labour pains occur regularly; not more than five injections of 0.5 c.cm. are given. Tholen used this method in 48 patients, of whom 17 were primiparae and 31 multiparae. In 3 of the primiparae the membranes were broken and in 14 intact, and of the multiparae 11 had their membranes broken and 20 intact. In 76 per cent. of the primiparae and 77 per cent. of the multiparae a favourable result was obtained. Patients who had not reached full term showed only false pains, and sometimes the uterus did not react at all.

431. Pulmonary Tuberculosis and Pregnancy.

E. W. BRIDGMAN and V. NORWOOD (*Bull. Johns Hopkins Hosp.*, February, 1926, p. 83), having examined 14,000 obstetrical histories, report that among these patients 134 were found to be suffering from pulmonary tuberculosis. They obtained no evidence that pregnancy increased the incidence of tuberculosis, though it seemed probable that gestation and the puerperium might be a final factor in the breakdown of the patient's resistance. The authors point out that when it is remembered that the child-bearing age corresponds with the age period at which pulmonary tuberculosis ordinarily appears, and that the female incidence rate at this age is below the male, except between the ages of 20 and 30, it seems likely that the association of tuberculosis and pregnancy is largely accidental. Of the 134 patients the diagnosis was not finally confirmed in 50, and in 17 pregnancy was associated with definite but inactive pulmonary disease, unilateral in 10 cases. Ten patients were still alive six to twelve years after delivery; one had two recrudescences of the disease (one year and two years after delivery), and one had four subsequent pregnancies within five years, during which her tuberculous lesions remained quiescent, though eleven years later she went to a sanatorium. Another patient developed active tuberculosis four years after delivery, requiring sanatorium treatment, but two years later she was again in good health. Of the 10 patients 7 were quite well from six months to five years after delivery, and all except 2 of the 17 patients had full-term children. These patients were all in poor circumstances, but the majority were not made worse by pregnancy, nor did they subsequently require treatment. In 31 cases pregnancy was associated with active tuberculosis; the short time between the onset of this disease and the pregnancy excluded 11 from consideration, but of the remaining 20, 2 were improved, 8 unimproved, and 10 had died one year after delivery. These figures, compared with those of tuberculosis in non-pregnant women, indicate a 10 per cent. worse prognosis, and it is not disputed that the occurrence of pregnancy in patients with active tuberculosis is disastrous. In a fourth group of 12 cases pregnancy was associated with tuberculosis, and therapeutic abortion was performed between the second and third months. Three patients could not be traced beyond two weeks subsequently, but of the remaining 9, 2 were living and improved at the end of one year; 2 living, but unimproved; and 5 had died within one year. It is suggested that operative procedures make the prognosis worse. In 19 cases pregnancy and tuberculosis were associated with other diseases, such as syphilis, chronic nephritis, and morbus cordis. The prognosis in such conditions was uniformly bad. The authors add that where the tuberculous lesion is fibroid, and has been quiescent for at least three years previously, the risks of pregnancy are not prohibitive if suitable rest and freedom from household duties are obtained.

432. Complete Post-partum Uterine Inversion.

J. SARF (*Presse Méd.*, February 17th, 1926, p. 212) records a fatal case of this rare complication, which occurs, according to various Continental authorities, once in 180,000 to 400,000 cases. Sarf believes that although it is a rare complication it is encountered more frequently than this. He advises that its possibility should be borne in mind in every abnormal delivery. Sarf's patient was a primipara, aged 19, and labour lasted for about eighteen hours, no instrument being used. Half an hour after the birth of the child the placenta was in the vagina and its delivery was attempted by slight traction on the cord. A bulky tumour, to which the placenta was adherent, appeared suddenly at the vulva. There was severe haemorrhage and alarming symptoms of shock. Half an hour later the placenta was peeled off, the aorta was compressed, and the inversion completely reduced. In spite of subcutaneous injections of camphorated oil and an intravenous administration of 500 c.cm. of physiological serum, the patient failed to rally and died three and a half hours after the birth of the child.

433. Formation of an Artificial Vagina.

R. FRANZ (*Zentralbl. f. Gynäk.*, February 27th, 1926, p. 545) states that between 1904 and 1923 the mortality was one in five among fifty-three operations for the formation of an artificial vagina by the method of Haeberlin, Baldwin, and Mori. In this operation a piece of small intestine is made to serve the purpose of the congenitally absent vagina. An equal number of cases were operated on between 1911 and 1923 by Schubert's method, in which the large intestine is similarly utilized. Cases of congenital absence of the vagina in which more than the rudiments of a uterus are present are rare, and in only four cases has a haematometra been implanted into an artificial vagina derived from the large intestine; of these, two patients died, one had a vagino-colic fistula, while one operation was entirely successful and pregnancy followed. O. S. PARSAMOW (ibid., p. 550) records the case of a married woman, aged 23, in whom an artificial vagina was constructed from a piece of small intestine. Three years later the vagina was found to be 9 cm. long and there was no sign of dyspareunia. The patient in the meantime had married again, and the second husband was unaware that an operation had been performed, or that the patient did not menstruate.

434. Pernicious Anaemia and Pregnancy.

DEVRAIGNE and G. BLUM (*Bull. Soc. d'Obstét. et de Gynécol. de Paris*, No. 2, 1926, p. 114) describe a case of pernicious anaemia which proved fatal in the fifth month of gestation. The patient had had an early miscarriage four months after her marriage in August, 1923, but menstruation had since been regular until April, 1925. Pallor and debility came on insidiously, and the patient was admitted to hospital in September, when the blood examination showed a typical picture of pernicious anaemia. The Wassermann reaction was negative. Abortion followed three weeks later. No other pathological condition was found at the necropsy though only four months had elapsed between the onset of the disease and its fatal termination.

Pathology.

435. The Cerebro-spinal Fluid in Encephalitis Lethargica.

A. HANCOCK (*Journ. Ment. Sci.*, January, 1926, p. 58), in an investigation of twenty-three cases in the chronic stage of this disease, the duration varying from five years to four months, found the Wassermann reaction always negative. Pandy's test for globulin was positive in one case of five years' duration, and of the Parkinsonian type; two other cases showed faint reactions, but twenty of the series were negative. Only five cases showed a protein content above 40 per cent. The colloidal gold reaction (Lange) showed some change in ten of the twenty-three fluids examined; these changes were in all cases slight—usually "1" or "2"; in one case only was a change up to "3" shown. The sugar content was estimated in nineteen of the fluids, the method employed being Calvert's blood-sugar method adapted for cerebro-spinal fluid. In 58 per cent. of the cases the sugar present was above 0.05 per cent. (0.04 to 0.06 per cent. being the normal). In no case was the figure lower than 0.05 per cent. Hancock thinks that the importance of these figures lies chiefly in the fact that the sugar does not in any case show a decrease in amount, as is the case in tuberculous meningitis. The chlorides present were estimated in sixteen of the cases. No great variation from the normal 0.70 to 0.76 per cent. was found, as contrasted with tuberculous meningitis, where the figure is usually below 0.60 per cent.

436. Rare Fungus Infections.

L. BELLUCCI (*Arch. Ital. di Otol., Rinol. e Laringol.*, January, 1926, p. 1) reports three cases of mycosis in oto-rhino-laryngology. The first was a case of *Acremonium potronii* infection of the tonsil—an exceedingly rare condition. The patient was a woman, aged 35, who suffered from frequent attacks of peritonsillitis. On examination the right tonsil was found to be much reddened, swollen, and covered with small yellowish-white spots. Some were situated at the mouth of the tonsillar crypt, some in the tissue, but superficially placed; the majority were found on the upper pole of the tonsil. The uvula and the pillars were infiltrated and red, the left tonsil was quite normal. A bacteriological examination revealed the presence of fine filaments, and culture showed a profuse growth with folded surfaces of a transparent pinkish colour which was identified as *Acremonium potronii*. The condition did not respond to treatment with glycerin of iodine and recurred after destruction by the galvano-cautery. It finally yielded to treatment with potassium iodide. In the second case on three separate occasions cultures were made from the crusts of a typical long-standing case of ozaena. The fungi found were numerous colonies of *Penicillium crustaceum*, colonies of other licelia, *Aspergillus glaucus*, *Sterigmatocystis nigra*, and, on one occasion, *Oöspora*. The author remarks that *Penicillium* is difficult to recognize by means of an ordinary microscopic examination, but the presence of *Sterigmatocystis nigra*, which can be easily identified, shows the genus of mycelium to which the infection belongs. The third case was that of a man, aged 25, who complained of pain, tinnitus, and deafness in the left ear following rheumatism. He had treated himself with hydrogen peroxide, which had cured the pain but gave rise to a febrile condition and discharge from the ear. The mastoid was not tender. The external meatus was red and sore to the touch, and there was a perforation of the postero-inferior quadrant of the drum. Small yellowish-white spots were seen on the lining of the meatus. Cultures were therefore made and *Sterigmatocystis nigra* was found. Treatment with potassium iodide was completely successful.

437. Ultra-violet Radiation and the Alkali Reserve of the Blood.

C. DE GHELDERE and M. DE ROOVER (*C. R. Soc. de Biologie*, March 26th, 1926, p. 784) have found that ultra-violet light exerts an influence on the alkali content of the blood. Rabbits, whose backs had been shaved, were exposed in a small cage to a mercury vapour lamp 20 cm. away; the lamp was of the Hewitt pattern, and was running under 120 volts and using 5 amperes. Specimens of blood were taken at intervals from the marginal vein of the ear, liquid paraffin being used to protect them from the air. The blood was centrifuged at high speed for ten minutes; 0.5 c.cm. of the serum was then titrated by the method described by Bouckaert. The animals were kept fasting for some hours prior to the exposure, and were secluded in a dark room so as to avoid the effects of daylight. Neither fasting nor obscurity had any influence on the alkali reserve, as tested by preliminary experiments. The exposure of a rabbit for three hours under the conditions described resulted in a marked fall of the alkali content of the blood. In a typical experiment 0.5 c.cm. of serum before irradiation neutralized 1.37 c.cm. of N/100 sodium bicarbonate solution; after three hours' exposure it neutralized 1.03 c.cm. and an hour later only 0.83 c.cm. Recovery of the normal titre was complete in twelve to forty-eight hours. Control animals, screened from the light by lead or glass, remained unaffected. Ordinary daylight apparently had no action on the alkali reserve. From these facts, and from the circumstance that a fall in voltage deprived the light of its action, the authors conclude that the lowering of the alkali content of the blood is a function of the wave-length employed.

438. Propagation of Foot-and-Mouth Disease.

C. KLING and A. HÖJER (*C. R. Soc. de Biologie*, March 12th, 1926, pp. 613, 615, and 618) have investigated the epidemiology of foot-and-mouth disease in Sweden, with particular reference to its mode of transmission. Since 1875 there have been twelve outbreaks; the last one, which started in November, 1924, is still in progress. Up to May, 1925, no fewer than 4,000 herds of cattle had been attacked. About 90 per cent. of the outbreaks in this last epizoötic have commenced in the urban areas—that is, within a radius of 20 kilometres round the eight largest towns. The larger farms have suffered far more frequently than the smaller ones. From careful examination of the available evidence they conclude that infection is not carried by the air, nor by imported foodstuffs, nor, as a rule, by infected cattle, since the movement of animals is severely restricted. The earliest outbreaks have occurred round the four chief centres of population—Helsingborg, Kevlinge, Malmoe, and Ystad; and it was shown that twenty-nine of the thirty-three farms that were first attacked had been in relation with these towns immediately preceding the outbreak. This incidence in close connexion with the main centres of traffic leads the authors to conclude that infection is carried by man. The further spread from the primary to the secondary centres is likewise explicable on this hypothesis. The evidence suggests that the virus gains access to the mucosae, on which it can remain viable for some days, man being a healthy carrier of the disease. It seems very unlikely that the virus is capable of being carried on the clothes. Occasionally man is himself a victim of the disease; this possibility has been demonstrated experimentally as well as naturally. After recovery his blood contains virulicidal antibodies, which have been used to prove the nature of the infection. Most of the carrier incidence is thought to be due to the consumption of infected milk, not to contact with infected cattle; but it appears probable that infection may occur from one healthy human carrier to another. These carriers are the chief method by which the disease is spread amongst cattle.

439. The Inheritance of Acquired Immunity.

O. HERRMANN (*Centralbl. f. Bakt.*, March 1st, 1926, p. 81) has made experiments on the inheritance of acquired immunity to rabies in rabbits. It was found that the young were often immune, even when born as long as three and a half months after the active immunization of the mother had been completed. Such animals resisted the subdural inoculation of street virus; but the number of young that were immune depended on whether one or both of their parents were immune. When the mother alone was immune about 33 per cent. of the young proved to be resistant to the virus. When both father and mother were immune about 88 per cent. of the young were resistant. The experiments from which these results were obtained were, however, not strictly comparable. In the first series pregnancy did not supervene till some time had elapsed since the active immunization of the mother; in the second series pregnancy occurred during the course of immunization. No relation was found between the immunity of the young and the colour of their hair. The results are not sufficiently numerous to determine whether the inheritance of acquired immunity followed the Mendelian law, but the author thinks that they favour this interpretation.

440. A Mycological Test for Sugar in the Urine.

A. CASTELLANI and F. E. TAYLOR (*Journ. Amer. Med. Assoc.*, February 20th, 1926, p. 523), who have previously reported that the classical yeast fermentation test for glucose is not specific, since ordinary samples of yeast will ferment levulose, maltose, galactose, saccharose, lactose, and other carbon compounds as well as glucose, now give further details of the mycological test which they recommend in its place. For the identification of glucose in the urine they suggest using a fungus (*Monilia balcanica*) which only ferments glucose; *Monilia krusei*, which ferments only levulose in addition to glucose, may be used if the former fungus is not obtainable. The mycological test can be used further to differentiate a mixture of carbohydrates in the urine, and a tabular classification of the action in this respect of various fungi and bacteria is given. Reference is made to the authors' article in the BRITISH MEDICAL JOURNAL (1917, vol. ii, p. 855), which describes the test in detail.

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

441. The Mechanism of the Cardiac Rhythm.

E. DONZELOT (*Presse méd.*, February 17th, 1926, p. 211) criticizes the generally accepted theory that cardiac rhythm originates in a single impulse provided by the sino-auricular node situated at the junction of the superior vena cava and the right auricle and the atrio-ventricular node situated in the septum in the auriculo-ventricular region and prolonged as the bundle of His. Donzelot suggests that these septal structures act as an accessory node or centre, and that in cases of injury or disease of the sino-auricular or atrio-ventricular node or the bundle of His, causing interruption of conduction, this accessory centre can initiate rhythmic impulses and thus prevent ventricular paralysis. But this rhythm, peculiar to the ventricles, is itself subject to more or less prolonged blocks which cause serious disturbance arising from ischaemia of the nerve centres (vertigo, syncope, epileptiform crises, resulting in the Stokes-Adams syndrome). Hence appears the necessity for the third hypothesis, which regards the pneumogastric nerve as an important factor in this problem; this nerve contains inhibitory (depressor) fibres which are the conductors of sudden inhibitory impulses resulting in prolonged and quite definite ventricular arrest. Moreover, the pneumogastric fibres pass from auricle to ventricle, following the course of the bundle of His. A fourth hypothesis explains how, if that bundle is severed by a lesion, the inhibitory fibres can still arrest ventricular contraction. It has been found that the nerve fibres are more resistant than the neuro-muscular tissue of the bundle of His, which may be destroyed while the nerve fibres in close proximity still retain their conductivity. The author rejects the theory of a single stimulus; he believes that the cardiac rhythm is produced by two independent stimuli—one auricular, the other ventricular. Further, these two stimuli are normally regulated by certain factors, among which variations in intracardiac pressure play a predominant part. These automatic auricular and ventricular structures are stimulated by variations of intracardiac pressure, playing the part of condensers, and interposed between the intracardiac nervous system and the contractile fibres. Finally, the sensitiveness of these different structures—nervous, connecting, and contractile—is itself regulated by the intensity and rapidity of the exchanges between the cells and the blood in the coronary circulation, and by the tone of the vago-sympathetic system. To sum up, the only direct connexion between the auricular and the ventricular systoles is the stroke of the auricular pump which enables the ventricles to attain, almost instantaneously, the internal pressure which determines the sudden contraction.

442. Sequels of Insulin Treatment.

A. T. B. JACOBSEN (*Ugeskr. f. Laeger*, January 21st, 1926, p. 66) has studied the records of some 45 diabetic patients treated in hospital over a period of more than two years. There were 8 deaths, one of which was due to abscesses caused by the insulin, and 3 of which were due to coma. Of the survivors, 7 had been comatose and 4 had been threatened by coma. Yet the survivors were fit for work, only 2 complaining of a much reduced capacity. With regard to the amount of insulin required by the survivors, some still required the original dosage and others could manage on less, but, as a rule, in severe cases it had been found necessary to increase it. In several of the moderately severe cases the patients had become tired of the injections and had discontinued them for months, but had had to return to them, taking about two injections a week. While abscesses were frequent when solid insulin was used, they had become rare since the introduction of liquid insulin. These insulin abscesses increased the concentration of sugar in the blood and provoked glycosuria and acidosis: two patients had to be admitted to hospital with coma resulting from insulin abscesses. In only one case was severe poisoning from an overdose of insulin observed. C. HOLTEN (ibid.) has studied the fate of 73 diabetics treated in hospital with insulin before October, 1924. There were 17 deaths, all of which occurred from a few hours to four weeks after the institution of insulin treatment. All were complicated cases, the complications being such conditions as pneumonia and heart disease. Of the 56 patients who were discharged, 10 were able to discontinue the insulin, while 46 had to continue it at home; of these 4 had died and 4 could not be traced. The surviving 38 were still fit for work.

443. Sea-Sickness.

R. RIBOLLA (*Journ. Trop. Med. and Hygiene*, February 15th, 1926, p. 59) discusses the pathogenesis of sea-sickness. He accepts a modification of Nolf's theory, and concludes that the condition is a functional disturbance due to hyperaemia of the vestibular apparatus, produced by the constant changes in the position of the body on the ship in movement (movements which have an opposite direction in pitching and rolling) by which at first the semicircular canals and the endolymph simultaneously follow the movements of the body, but when the movement is in the opposite direction the endolymph continues to be carried in the direction produced by the first impulse and then goes inversely to the movements of the semicircular canals. Thus the endolymph impinges on the ampullae and stimulates the vestibular nerve; the vagus nerve is stimulated reflexly and vertigo results. This does not exclude the view that the automatic centres of equilibration of the body are also concerned in part, sea-sickness being a phenomenon of consciousness, and absent in sleep. On this theory Ribolla advocates the use of vagal sedatives and the introduction into the external ear of tampons to produce local ischaemia.

444. Duration of Infectivity in Measles.

F. REDLICH (*Klin. Woch.*, January 29th, 1926, p. 186) states that the discordant views expressed by various authorities as to the duration of the infectivity of measles has induced him to record his observations at the Lemberg children's clinic on the occasion of prophylactic inoculation of children against measles with Caronia's vaccine. He found that while the prodromal stage was highly contagious, twenty-four hours after appearance of the eruption none of the children exposed to infection developed the disease. The objection that the children were insusceptible owing to a previous attack did not hold good, as they subsequently contracted the disease after exposure to infection by children in the prodromal stage.

Surgery.

445. Osteomyelitis of the Frontal Bone.

A. E. BULSON (*Journ. Amer. Med. Assoc.*, January 23rd, 1926, p. 246) calls attention to osteomyelitis of the frontal bone as a complication of frontal sinusitis. Of 55 cases recorded in the literature 28 occurred as a complication of chronic suppuration, with 21 deaths, and 27 as a complication of acute suppuration, with 16 deaths. Of the 28 complicating chronic suppuration the osteomyelitis was subsequent to operative intervention for the sinusitis in 20 cases, while of the 27 acute cases osteomyelitis was discovered at the operation in 18. Three of the acute cases were fulminating and developed coincidently with the acute sinusitis; they were all fatal. Pneumococcal and streptococcal infections ran the most violent course, were most difficult to control, and were most liable to end fatally. The disease may extend to the temporal, parietal, and occipital lobes, and, while operation for the removal of the disease focus may sometimes result in complete recovery, the relief is usually only temporary, since fresh foci may appear. The best results followed open treatment, with ventilation and drainage after thorough removal of all diseased bone, and the local use of mercurochrome. Bulson adds that once the disease has become established radical resection of the whole area of the diseased bone, extending beyond the obvious limits of the disease, affords the only means of cure, and in doubtful areas it is safer to remove bone than to leave it.

446. Fatal Maxillary Necrosis in Chronic Benzol Poisoning.

J. LÖWY (*Med. Klin.*, March 12th, 1926, p. 404) has found records of thirty-one fatal cases of benzol poisoning prior to 1925. The main clinical manifestations are stated to be numerous subcutaneous and submucous haemorrhages resembling those of scurvy, with anaemia, leucopenia, and lymphocytosis. Löwy now reports the case of a motor-tyre repairer, aged 43, who had followed his trade for eighteen years. He used a rubber paste containing benzol and other chemicals as well as carbon disulphide. Two or three weeks before his admission to hospital the patient had had pain and swelling of the right cheek, with tenderness on pressure over the superior maxilla; later symptoms were right amblyopia, vertigo, anorexia, and pyrexia. He had been very pale for two months.

The urine contained albumin, urobilin, and urobilinogen. The pupils were equal and reacted briskly. Over the right superior maxilla there was a definite tender swelling extending to the zygoma and the inferior maxilla, with fluctuation on pressure. The breath was very fetid, the teeth were defective and septic, and three upper molars were loose. Many submucous haemorrhages were present. There was some dulness at the right pulmonary base with generalized râles. The area of cardiac dulness was normal, but a loud apical systolic bruit was heard. The liver was enlarged and tender. A skiagram showed that the outlines of the right antrum were obscured and an ophthalmoscopic examination showed retinal haemorrhages. The viscid sputum contained reddish-brown flakes and many Gram-positive cocci; no tubercle bacilli were found. The blood pressure was 82 mm.Hg. The blood picture showed a great deficiency of erythrocytes and haemoglobin, with leucopenia and a definite leucocytosis. Death occurred from heart failure. The necropsy showed profound anaemia, fatty degeneration of the heart muscle and of the liver, septic osteitis of the right superior maxilla, antral empyema, aspiration pneumonia, pulmonary oedema, and gangrene, with acute splenitis. Löwy points out that this case clearly indicates that maxillary necrosis may occur in benzol workers as well as in those who handle phosphorus and mercury. The septic condition of the teeth greatly aggravated the initial gingivitis set up by the inhalation of the poisonous vapour, and the three loose upper molars were the route by which the septic infection travelled to the maxillary antrum.

447. Splenic Abscess in Typhoid Fever.

C. MOREL, C. DAMBRIN, and J. TAPIE (*Ann. de Méd.*, January, 1926, p. 5), who report a case in a woman aged 27 successfully treated by operation, state that since the first case recorded by Lemaistre in 1848 only thirty cases of splenic abscess in typhoid fever have been published. The complication is not peculiar to severe forms of typhoid fever, but may occur in moderate or even mild cases. The date of its appearance ranges from the third week to a long time after apparent recovery from the disease. Bacteriological examination of the contents of the abscess has not always been made, but the typhoid bacillus has always been found when it has been carefully looked for. The abscess is usually situated in one of the poles of the organ, and almost always the upper pole. The abscess may be single, but multiple abscesses are not exceptional. The size of the abscess varies from that of a hazel-nut to that of two fists. Pain is a constant symptom, whether spontaneous or caused by palpation only, continuous or paroxysmal. Its violence explains the dyspnoea and immobility of the base of the thorax on one side. Fever may be continuous or intermittent. The abscess may invade the pleura and lungs or give rise to peritonitis or rupture into the colon. As regards the diagnosis, splenic abscess must be distinguished from abscess of the abdominal wall, pyonephrosis, subphrenic abscess, and empyema. Radiological examination will often clear up the diagnosis, but exploratory puncture is not of great value. Of thirteen patients treated by operation only one, reported by Rokitsky, died, a splenectomy having been performed; all the others, treated by splenotomy, recovered.

448. Abscess of the Larynx.

J. C. SCAL (*Med. Journ. and Record*, February 3rd, 1926, p. 182) reports three cases of abscess of the larynx, two of which ruptured spontaneously and the other was cured by incision. He states that the condition is usually idiopathic, though trauma of the larynx, inhalations of noxious vapours, and exposure to wet and cold have also been cited as causes. In children it may be due to infectious diseases and be mistaken for retropharyngeal abscess. The symptoms are a choking sensation, hoarseness, pain on swallowing, dyspnoea, and general malaise. The usual site of the abscess is the anterior surface of the epiglottis, the aryepiglottic folds, or the arytenoid cartilage. Rapid recovery is usual after rupture or opening of the abscess, but the condition must always be considered serious, since it may lead to asphyxia, involvement of the lungs or mediastinum, or septicaemia.

449. Periarterial Sympathectomy.

G. M. GUREWITSCH (*Zentralbl. f. Chir.*, February 27th, 1926, p. 521) refers to the employment of periarterial sympathectomy in tuberculosis of joints, and also in the case of fractures. It has been attempted in epilepsy and migraine, although the etiology and pathology of these diseases are unknown, as are also the anatomical and physiological bases of the operation itself. After reviewing the recent literature, the author describes a theory of segmental vascular innervation, and relates the case of a pale but well built boy, aged 16, who had had chronic ulcers of both legs for more than a year. Lériche's periarterial sympathectomy was performed on both femoral arteries. At first the ulcers showed rapid improvement, but this was not maintained, and it was subsequently found that at the sites of operation the arteries were surrounded by dense scar tissue, with adhesions to the neighbouring muscles. In other cases more or less extensive necrosis of the arterial wall at the site of operation has occurred. Gurewitsch concludes that periarterial sympathectomy is so uncertain in its ultimate results that it is contraindicated in all diseases.

Therapeutics.

450. Treatment of Acute Chorea.

DEREUX (*La Vie Méd.*, March 5th, 1926, p. 393) observes that chorea is an organic nervous disease with an infectious origin. Three infections may induce an attack—namely, acute articular rheumatism, hereditary syphilis, and lethargic encephalitis. The treatment of acute chorea depends upon the nature of the infection. Most cases in children are due to rheumatism, usually to an acute rheumatic arthritis. These require the administration of large doses of chemically pure sodium salicylate, especially if arthritis or endocarditis is present. Dereux finds that children can take the usual adult doses, intolerance being most frequently due to impurity of the salt; it should be dissolved in alkaline fluids and its elimination in the urine be tested with ferric chloride. If rejected by the stomach, sodium salicylate should be given by the rectum; or, in very serious cases, it may be injected intravenously. The treatment must be continued for some time after apparent cure. Aspirin is sometimes useful, as an alternative, and arsenic has been largely employed, either in the form of arsenious acid (in 1 in 1,000 aqueous solution) or organic arsenical compounds. Arsenious acid should be given in rapidly increasing doses, commencing with the equivalent of 10 mg. and increasing the dose to 25 or 30. Toxic symptoms may occur at this stage, when the doses should be reduced gradually to the initial amount. Hutinel and Babonneix never give arsenic to children under 6 years of age; they never give larger doses than 15 mg. Dereux advises that the child should be under constant medical supervision, confined to bed, and restricted to a milk or milk and vegetable diet. The arsenic may also be given mixed with fresh butter and spread on bread, when it is usually well tolerated. Such organic preparations as sodium cacodylate or methyl arsenate are sometimes useful, and arsenobenzol has been used very successfully; it should be given intravenously, 10 to 20 cg. every six days being the average dose. Antipyrin is sometimes useful, but is contraindicated by renal disease; sedatives recommended include chloral, bromides, and camphor monobromate. Warm baths and wet packs have a sedative effect. Dereux adds that chorea is an obstinate disease, which frequently recurs unless treatment is continued long after apparent cure. Many French authors believe that it may have a syphilitic origin. The chorea of pregnancy is frequently a recurrence of that of childhood, though some cases are due to lethargic encephalitis.

451. Tryparsamide in Neuro-syphilis.

P. A. O'LEARY and S. W. BECKER (*Med. Journ. and Record*, March 3rd, 1926, p. 305) record observations upon 207 cases of neuro-syphilis, 113 of which were treated with at least two full courses, each of ten injections, of tryparsamide. From 1 to 3 grams were administered at weekly intervals in conjunction with potassium bismuth tartrate and 0.2 gram of butyn every five days, or with mercury succinimide, 1/6 to 1/4 grain five times a week for six weeks, or with mercury salicylate, 1 to 2 grains once a week. If the interval between the courses was two months or less no other treatment was given, but if longer, mercurial inunction was used. While the drug appeared to be of value in the treatment of the paretic type of parenchymatous neuro-syphilis, it was not found to be as successful as the treatment of general paresis with malaria, but the authors recommend it for patients unsuitable for the latter treatment. As the result of observations based upon subjective and serological improvement they are of opinion that certain patients with early paresis are markedly benefited by tryparsamide. In seven cases a complete return of the spinal fluid reactions to normal occurred, but without any associated clinical improvement, and it was not possible by clinical and serological criteria to determine beforehand which patients with paresis would improve. The intramuscular injection of bismuth in connexion with tryparsamide appeared to give better results than those obtained by either drug given alone. The authors consider that tryparsamide is a valuable aid in the treatment of early general paresis in view of its low cost, availability, and small percentage of complications and reactions.

452. Insulin in Suprarenal Insufficiency.

G. MARAÑÓN (*Arch. de med., cir. y esp.*, January 23rd, 1926, p. 145), who records several illustrative cases, comes to the following conclusions. Suprarenal insufficiency gives rise to a special hypersensitiveness with regard to insulin, severe and even fatal symptoms occurring in subjects of Addison's disease after apparently harmless injections of this drug. This hypersensitiveness bears no relation to the general condition of those suffering from Addison's disease, since it does not occur in other states of cachexia even when the blood pressure and glycaemia are low. Evidence of antagonism between adrenaline and insulin suggests that the deficient secretion of adrenaline is the cause of this hypersensitiveness. The physiological remedy of these symptoms, therefore, appears to be adrenaline. There is a striking clinical resemblance between the syndrome of hypoglycaemia following injection of insulin and certain severe symptoms occurring spontaneously in the last stage of Addison's disease, which suggests that a sudden hypoglycaemia may play a part in the production of the so-called "Addisonian encephalopathy." Recent observations made by Marañón showed that in patients who died of diabetic coma in spite of insulin treatment, which had caused a disappearance of hyperglycaemia and acidosis, there were severe lesions in the suprarenals. This factor, therefore, should be considered in cases in which coma develops after cure of the acidosis, as has been recorded by Campbell, Weinberger, and Marañón himself.

453. Antimony Trichloride in Lupus.

J. DARIER (*Bull. de Derm. et de Syph.*, February, 1926, p. 72) recommends for rapid improvement of old-standing but not extensive lupus the use of an elective caustic, and suggests the following formula: Freshly prepared antimony chloride 2 grams, salicylic acid 2 grams, official creosote 4 grams, novocain 4 grams, lanoline 8 grams. This is rather milder than Unna's "green pomade." If the lupus has not already ulcerated, the epidermis should be removed with the galvanocautery or by light curetting. The ointment is applied every other night in a layer as thick as a knife-blade, being washed off in the morning with sterilized water and replaced by zinc ointment. Darier claims that usually fewer than ten applications are needed, and that in thirty years' experience he has had very few relapse cases, although patients have to be watched at first for early recrudescences.

Dermatology.

454. Etiology of Recklinghausen's Disease.

P. DOTTI (*Bull. del. Sc. Med.*, November–December, 1925, p. 337), who records numerous illustrative cases, maintains that Recklinghausen's disease is much more frequent than the cases published would indicate, as among 170 patients at the hospital for chronic diseases at Bologna he had found ten complete forms (cutaneous pigmentation and neurofibromata) and four cases with neurofibromata only. The theories put forward to explain the pathogenesis of the disease are as follows: (1) Feindel's embryonic theory, which is based on the common ectodermic origin of the nervous system and the skin. According to this theory the coexistence of changes in both these systems is regarded as a developmental anomaly of the ectoderm at a very early stage of embryonic life. In support of this view is the frequent occurrence of hereditary and familial forms. (2) Recklinghausen's infective theory, according to which the disease is due to the action of a micro-organism on the nerve trunks, in the same way that leprosy is caused by Hansen's bacillus. (3) The endocrino-sympathetic theory, according to which the disease is due to affection of some gland of internal secretion, especially the suprarenals, or of the sympathetic, or of both. Dotti's experience supports the embryonic theory, as in five of his cases the disease assumed an hereditary and familial form; in three instances it appeared in three generations, and in two in two generations. Another argument in favour of the embryonic theory was that in one family skeletal malformations and congenital lesions in the form of mitral stenosis, angiomata, and craniofacial asymmetry were present.

455. Eczema.

H. C. MARTIN (*Med. Journ. of South Africa*, January, 1926, p. 155) calls attention to the psychological factor in the causation of eczema, realizing that in addition to a possible external irritant there is also an internal and essential factor, the really eczematous person possessing mental and nervous characteristics generally of an anxious and worrying disposition. Another internal factor which may be present is toxic, including such poisons as gout and rheumatism, and others of intestinal origin. Martin describes his own experience as a sufferer since 1908, with a period of eight years' immunity following *x*-ray treatment. Recurrence followed a period of worry and anxiety, combined with the injudicious use of antiseptics. The *x*-ray treatment consisted of a small dose weekly, then fortnightly, and then monthly; at the end of a year the condition was apparently cured, and remained so for eight years. His experience has convinced him of the necessity for early and vigorous treatment, and that in intractable cases remaining unchanged for over a year, in spite of ordinary treatment, recourse should be had to *x* rays or ultra-violet light. He adds that if the condition is allowed to drift the psychological factor, with its feeling of despair, will diminish the chance of cure. He does not consider any restriction of diet necessary, except as regards pickles, sauces, and salt, which latter he found especially harmful; the prohibition of alcohol in the case of a patient who is moderate and who has been accustomed to it for years he regards as harmful.

456. Symmetrical Dysmenorrhoeic Dermatitis.

J. TRAGANT (*Rev. med. de Barcelona*, December, 1925, p. 538), who reports an illustrative case, states that since Matzenauer and Polland first described this disease in 1912 not many examples of it have been recorded. The first thing noticed by the patient is an intense burning sensation in the part affected. The eruption consists of a moist dermatitis, an urticarial erythema, or a spontaneous necrosis. Any part of the body may be attacked, but only exceptionally the scalp, as in Tragant's case. Matzenauer and Polland attribute the disease to passage into the blood of toxic metabolic products due to lesions of the ovarian follicles. Kreibich, on the other hand, believes that the lesions have an angio-neurotic basis. Tragant's patient was a woman, aged 46, who suffered from a mild form of the disease from the age of 14 to 18, but after ovariotomy for bilateral annexitis at the age of 31 she had a more severe attack, which was not affected by ovarian treatment.

457. Ringworm of Scalp in the Adult.

H. FOX (*Arch. Derm. and Syph.*, March, 1926, p. 398) reports a case of ringworm of the scalp in an adult, and remarks upon the rarity of this condition; he has been able to collect records of only 53 cases, of which three were in his own practice. He believes that cases may be overlooked by failure to use the laboratory; in his own cases the clinical diagnosis was confirmed by microscopic examination and culture. The case described occurred in a coloured domestic servant, aged 25 years. She gave a history of circinate eruption of the neck two months previously, which had cleared up at once with iodine treatment. A week later, however, the eruption occurred on the occipital region and presented the appearance of a pustular ringworm of the kerionic type. Cultures proved the infection to be due to *Microsporon audouini*, an organism which is not usually pyogenic. The author's two previous cases were also in negroes.

Obstetrics and Gynaecology.

458. Retroversion of the Gravid Uterus.

LAURENTIE (*La Vie Méd.*, February 19th, 1926, p. 281) states that retroversion may occur under two distinct conditions. In the first of these the uterus is primarily retroverted, and pregnancy is a secondary development. Retroversion of the uterus is not an absolute cause of sterility, especially if it is not associated with congestion or inflammation of the uterus or adnexa, or fibrous degeneration of the uterine wall, or sclero-cystic changes in the ovaries. In the second condition the uterus is primarily in a good position and retroversion is secondary, the large size of the pelvis and looseness of the ligaments being predisposing causes. One of four events may ensue, the first two being common, and the last two exceptional. (1) Retroversion does not give rise to any symptoms apart from some lumbar pain or, less frequently, vomiting of a severe type. Spontaneous rectification occurs in the second or third month, and pregnancy pursues a normal course. After delivery the uterus usually becomes retroverted again. (2) Abortion occurs in the second or third month, with or without retention of the placenta. (3) Incarceration of the uterus may occur after three or four months of pregnancy. The complications then are principally vesical—namely, retention of urine, haemorrhagic, purulent, or gangrenous cystitis, and ascending pyelonephritis. (4) Symptoms of incarceration are absent, and reduction of the uterus apparently takes place owing to enlargement of the anterior wall of the uterus, while the posterior wall remains fixed in the hollow of the sacrum. This is the condition of pseudo-reduction described by Pinard and Segond, Couvelaire and Potocki. As regards treatment,

reduction is not required in every case, but is necessary on the occurrence of persistent sterility or repeated abortions in otherwise healthy women. In most cases the reduction must be operative and consist in removal of adhesions and fixing the uterus in a good position. Expectant treatment includes prolonged rest in the ventral decubitus or genu-pectoral position, and frequent evacuation of the bladder and rectum. Incarceration requires evacuation of the bladder and manual reduction under chloroform. If this fails laparotomy is necessary. In cases of pseudo-reduction Caesarean section is indicated.

459. Suture of the Uterus after Caesarean Section.

W. BLAIR BELL (*Journ. Obstet. and Gynaecol. of the British Empire*, Winter No., 1925, p. 727) refers to his original article on suture of the uterine wound in Caesarean section (ibid., 1921, p. 530), and now reports an improvement in the technique with a view to making uterine sutures subperitoneal, so as to avoid post-operative adhesions. He states, however, that uterine adhesions have been found at subsequent sections in very few cases when the operation had been performed according to his previous method. In his more recent procedure a large, slightly curved Reverdin needle is passed through the peritoneum and uterine musculature, half an inch below the angle of the incision in the uterine wall, and as deeply as possible without puncturing the lining membrane of the cavity. A fairly long strand of No. 2 tanned catgut is attached, and the needle is withdrawn. It is then passed through the musculature and peritoneum on either side of the incision from within outwards, perforating the peritoneum at points a quarter of an inch from the apertures through which the suture had first been drawn, and one inch beyond the margin of the incision. The catgut is tied and a mattress suture is then formed, with the knot within the uterine wound. The remainder of the mattress sutures are inserted similarly, a space of three-quarters of an inch being left between them. The deep parts are thus brought into apposition throughout the length of the incision. The last suture is placed in exactly the same way as the first, and includes the portion of the uterine musculature beyond the incision. If required the uterus is washed out before the last suture is tied. The middle and superficial parts of the musculature are now closed by the utilization of the long ends of catgut left after the first layer of sutures has been tied for a future series of more superficial mattress sutures. In this way the whole of the divided musculature is brought together to form a very broad strong ridge. The peritoneum is finally sutured by means of a turning-in stitch. The author believes that rupture of the Caesarean scar is due more often to faulty technique in the closure than to sepsis.

460. Treatment of Cancer of the Cervix.

L. AUBERT (*Rev. méd. Suisse rom.*, February 25th, 1926, p. 65), who records three illustrative cases in women aged 58, 44, and 34, states that the association of radium treatment with operation increases the chances of recovery from cancer of the cervix. In some cases, indeed, which at first sight appear hopeless, it allows a permanent cure to be obtained. In such cases radium by itself may produce so much improvement as to suggest a cure. Operation, however, is indicated since a recurrence is otherwise certain. More or less latent new growth which cannot be entirely sterilized by radium can be removed by hysterectomy. In two of Aubert's cases the carcinoma remained active after applications of radium, and in the third case the growth seemed to have disappeared as the result of radium applications, but subsequent histological examination showed that the recovery was not complete. Hysterectomy, therefore, was performed in all three cases and complete recovery followed.

Pathology.

461. The Phenolsulphonephthalein Test in Renal and Circulatory Diseases.

C. LUNDSGAARD and E. MÖLLER (*Acta Medica Scandinavica*, February 11th, 1926, p. 242) have investigated the renal excretion of phenolsulphonephthalein and of water in different diseases, giving 1 litre of water by the mouth at the same time as they injected 6 mg. of phenolsulphonephthalein intravenously. They have considered an excretion of 70 per cent. of the dye in the first two hours, or of water in the first four hours, after administration as the lowest limit of the normal zone. In most cases of uncomplicated cardiac disease without signs of circulatory insufficiency at rest, the excretion of the dye was below normal. The authors attribute this to a change in the renal circulation. The decrease was still more frequent and marked in heart disease with absolute circulatory insufficiency. There was more often a decreased excretion of the dye than of water, for which reason the phenolsulphonephthalein test must be regarded as a very sensitive indicator of circulatory insufficiency, both general and renal. In essential hypertension there was a decrease in the phenolsulphonephthalein excretion which was if anything more frequent and greater than in heart disease. The cases of hypertension with absolute circulatory insufficiency showed a still greater decrease, but in 4 cases of cardiac neurosis excretion was normal. Of 18 patients with various kidney diseases the excretion and blood pressure were normal in 8; 4 of them were pure chronic nephrosis cases with only tubular symptoms. Of the 10 with decreased excretion 2 had normal blood pressure but had greatly decreased water excretion; the remaining 8 all had hypertension. Two patients with orthostatic albuminuria had normal excretion when kept in bed and decreased excretion when up. In a series of cases it was shown that phenolsulphonephthalein does not pass over into the ascitic, spinal, hydrothoracic, or subcutaneous oedematous fluids, indicating a fundamental difference between the phenolsulphonephthalein and Strauss's water tests. The authors contest Rowntree and Geraghty's view that the phenolsulphonephthalein test is a specific renal test. Maroulis held that the test registered accurately modifications of cardio-renal equilibrium. The present authors go further and state that the test is only valid for indicating nephritis when circulatory disturbances, including arterial hypertension, can be excluded, and when the water excretion is not too diminished. Later investigations have shown that the liver is concerned also, there being decreased excretion in liver disease.

462. Differentiation of the Streptococcus Group.

N. STOLYGVO (*Centralbl. f. Bakt.*, March 1st, 1926, p. 1) draws attention to the difference in behaviour of the pneumococcus and the haemolytic streptococci on heated blood agar, the former term comprising all chain-forming cocci which cause α-haemolysis on fresh blood agar plates (the pneumococci proper and the *Streptococcus viridans* type). Examining 182 cultures of streptococci of different origins from the human body, he found that 159 were able to decolorize chocolate blood agar, and gave α-haemolysis on fresh unheated blood agar; of the remaining 23, 22 gave β-haemolysis on fresh blood agar, but were unable to decolorize chocolate agar. The remaining culture was a completely non-haemolytic strain, which likewise had no action on chocolate agar. By their decolorization of chocolate agar the author thinks that the pneumococci can be certainly distinguished from the haemolytic streptococci. He considers this test even more valuable than the nature of haemolysis on fresh blood agar, for alterations that occur in the ability of strains to haemolyse fresh blood do not seem to be accompanied by any change in their action on heated blood.

463. Calcium Metabolism and Parathyroid Extract.

L. BERMAN (*Journ. Lab. and Clin. Med.*, February, 1926, p. 412) reports that by extracting the parathyroid glands of oxen with acidified water or alcohol, and removing lipins and proteins from the extract, a crystalline substance was obtained. This substance, when dissolved in Ringer's solution and injected into the circulation, was found to increase definitely the calcium content of the blood, thus supporting the theory that the parathyroid glands are concerned in calcium metabolism. When animals from which the parathyroids had been removed were treated with this substance, it was found that certain typical symptoms of parathyroid deficiency—malaise, anorexia, hyperpnoea, tremors, and tetany—were relieved. The animals were kept alive by daily injections, and died when this treatment was stopped. All these animals showed deficiency in the blood calcium content and increased nerve excitability, which was remedied by the use of the crystalline extractive.

464. Heredity and Cancer.

MAUD SLYE (*Paris Méd.*, March 20th, 1926, p. 257), as the result of investigations in mice, concludes that the resistance and susceptibility to cancer are transmitted as simple Mendelian units, as is also the site of occurrence of the lesion, but that these may be modified by selective breeding. Similar conclusions were reached as regards cancerous metastases. She states that susceptibility is the recessive character, resistance acting as a simple dominant. In mice the first cross between dominant and recessive types never produced cancerous offspring. In the mice studied chronic leukaemia sometimes appeared, and then followed the same rules of heredity. In the experimental work cancerous cachexia seemed to be due to necrosis of the growth or to secondary infection, and was not related to the size of the tumour. The growth of cancer in the mammary gland was found to be retarded by uninterrupted pregnancies, in contrast with the infectious diseases studied. No evidence was obtained that cancer is infectious.

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

465. The Prophylaxis of Measles.

S. ANDERSEN and F. WULFF (*Ugeskr. f. Laeger*, March 4th, 1926, p. 216) reports from the Blegdams Fever Hospital in Copenhagen the results of giving prophylactic injections of the serum of convalescents to 91 children exposed to measles in hospital. There were as many as twenty-five different sources of infection. Only 5 of the 91 contracted measles, and the immunity effected in the remaining 86 cases was the more striking as most of the children were at a very susceptible age: 49 were over the age of 3, 18 were aged between 1 and 3 years, 11 were between 6 and 12 months, and only 13 were less than 6 months of age. The duration of the passive immunity thus conferred was probably quite short, for three of these children subsequently developed measles two and a half, three, and three and one-third months after the injection of serum of convalescents. The dose of this serum found to be most suitable was 5 c.cm. for children under 1 year, 10 c.cm. for children between 1 and 3 years, and 15 c.cm. for children over 3 years. The serum was obtained by venesection of convalescent patients between the seventh and ninth days after the fall of the temperature to normal. The serum was taken and prepared at the State Serum Institute. The author concludes that this procedure is of most value in hospitals where children already admitted for other complaints can be protected from infection with measles by cases admitted by mischance. E. LENSTRUP (ibid., p. 218) gives an account of three aborted epidemics of measles in the Queen Louise's Hospital in Denmark. On the first occasion three cases of measles occurred on May 14th, 1925. In the same ward there were seven children who had not had, and four who had had, measles. The seven were treated with the serum of convalescents, from 5 to 10 c.cm. being injected into the muscles of the thigh; none of these seven developed measles. An involuntary control was a boy of 5 who was not given serum because, by mistake, it was assumed that he had already had measles. It transpired, after he developed measles, that this assumption was wrong. On the second occasion a child developed a measles rash in hospital. The eleven children, who had been in contact with her, were treated with serum, and ten did not contract the disease; the remaining child developed it after her return home. On the third occasion a child who developed measles in hospital had evidently been infectious for five or six days before serum was given to the seventeen contacts, twelve of whom were effectively immunized. The disease ran a very mild course in the other five cases. On none of the three occasions referred to were any ill effects from this prophylactic treatment observed.

466. The Significance of Pleurisy.

D. R. HASTINGS (*Minnesota Med.*, March, 1926, p. 114) has examined the case records of 1,182 tuberculous patients in a sanatorium and found a history of fibrinous pleurisy or of pleurisy with effusion in 55.7 per cent. Fibrinous pleurisy, he points out, may be the first symptom of pulmonary tuberculosis, and therefore pleuritic patients should be warned of this danger. He thinks that pleurisy with effusion should be considered clinically as a tuberculous process unless this etiology can be definitely excluded; treatment for tuberculosis should be undertaken at once. Apart from tuberculosis the causes of pleurisy are pneumonia, typhoid fever, nephritis, heart conditions, pyogenic infections, and new growths. In the treatment of effusion it should be remembered that since the process is probably of an immunizing origin the fluid should not be aspirated without some special indication such as the removal of a specimen for laboratory examination, the occurrence of pressure symptoms, or mediastinal displacement, delayed absorption, or the presence of an effusion on both sides of the chest. Hastings adds that empyema occurs more frequently after removal of the fluid, and that the "splinting" of a tuberculous lung by fluid gives some measure of rest to the part and may thus be beneficial to the patient.

467. Occurrence of the Sign of Duroziez.

I. MAHAIM (*Arch. des Mal. du Coeur, des Vaisseaux et du Sang*, February, 1926, p. 86) discusses the occurrence of the sign of Duroziez, an intermittent murmur in the femoral arteries, and describes the case of a workman, aged 54, who had had precordial pain and dyspnoea on effort for two years. The arteries were tortuous and thickened, the pulse forcible, the area of cardiac dulness normal, but the second aortic sound was accentuated. In the femoral arteries there was a double (systolic and diastolic) bruit. No cardiac bruit could be elicited after exercise, whether the patient sat or lay on his back; there was considerable dyspnoea. A skiagram showed hypertrophy of the left ventricle, and the aorta was very opaque but not dilated. Subsequently Mahaim has examined a large number of patients systematically and has found the sign of Duroziez in fifteen cases. Duroziez recognized the existence of a venous systolic bruit, only present when the femoral artery is compressed lightly; rather more pressure causes this to disappear, while still greater compression produces another arterial bruit. Duroziez also described a diastolic venous bruit, present only in tricuspid regurgitation when the right auricle is dilated and hypertrophied. The sign of Duroziez is not always found in aortic regurgitation. Mahaim states that in searching for this sign it must be established that the vascular diastolic bruit is not of venous origin. Pressure with the stethoscope increases the intensity of the arterial diastolic bruit and rapidly extinguishes a venous bruit coinciding with the diastole. The exaggeration of the diastolic ascent and elevation of the systolic pressure correspond with the production of the femoral double bruit in aortic incompetence. The bruit is absent in rheumatic aortic incompetence when the systolic pressure is only slightly raised, even if the diastolic ascent is exaggerated. The bruit is chiefly heard in arterial incompetence in which both the diastolic ascent and the systolic pressure are raised. Mahaim adds that in the absence of any aortic incompetence, as shown by auscultation, the double femoral bruit is found occasionally; this is the case in hyperpiesis, when the pulse is bounding, the diastolic ascent exaggerated, with aortitis and a hypertrophied left ventricle, and secondary mitral regurgitation. Its presence in such circumstances probably indicates a functional aortic incompetence, as yet unrecognizable clinically.

468. Antityphoid Inoculation.

W. SPÄT (*Med. Klin.*, February 26th, 1926, p. 328) states that in the autumn of 1914 inoculation against cholera and typhoid fever was made compulsory in the Austrian army. About a fortnight after introduction of inoculation against cholera, the epidemic of cholera came to an end. Almost at the same time, however, there was a subsidence of the cholera epidemic in the Russian army, which had not been inoculated. The subsidence of the epidemic, therefore, could not be attributed to inoculation. No inoculations were carried out against dysentery, and its incidence, which had greatly exceeded that of typhoid fever, fell in 1915 to a fifth, and in 1916 to a tenth, of the typhoid fever cases. As regards typhoid fever, although there was a steep fall in the incidence of the disease after the introduction of inoculation, a similar steep fall occurred in the Franco-Prussian war of 1870–71 without inoculation. Similarly in the American war of independence (1860–66) the number of typhoid cases fell from year to year without inoculation. Spät, therefore, concludes that there were no grounds for attributing the decline in the incidence of typhoid fever to inoculation. On the other hand, he brings forward figures to show that inoculation may cause an increased susceptibility to typhoid fever, especially during the first three months following the operation.

Surgery.

469. Sequels of Resection of the Stomach.

M. ASCOLI (*Il Policlinico*, Sez. Chir., March 15th, 1926, p. 117), who had formerly studied the changes in the gastric chemistry after gastro-enterostomy, records his observations on the gastric chemistry of eighteen patients who had been operated on in the surgical clinic of the University of Rome. Seventeen of these had had a gastric or duodenal ulcer, and one an epithelioma of the pyloric region. The operations performed were as follows: (1) Polya-Balfour resection—7 cases, including the case of epithelioma; (2) Billroth I resection—5 cases; (3) medio-gastric resection—5 cases; (4) cuneiform resection of ulcer—1 case. With the exception of one case in which the examination was made five years after the operation, all the patients were examined from twenty to twenty-five days after the operation. The results were as follows. In the Polya-Balfour resection there was

a fall of total acidity and a complete disappearance of hydrochloric acid. These changes were attributed to removal of a certain amount of gastric surface secreting hydrochloric acid and pepsin; to entrance into the stomach of the alkaline duodenal juice as shown by the presence of bile pigment; and to rapid evacuation of the contents of the stomach. In medio-gastric resection no changes worth mentioning were noted. In the Billroth I operation two distinct changes might occur, according as the absence of pyloric alkaline secretion was accompanied or not by an absence of bile and alkaline duodenal juice.

470. A. CIMINATA (*Arch. Ital. di Chir.*, January, 1926, p. 21), having determined experimentally the absorption of fats and proteins in normal dogs, has investigated the absorption in dogs which had undergone the Billroth II gastric resection, and examined the pancreas histologically. He also studied the external secretion of the pancreas after Billroth II resection by means of a permanent pancreatic fistula. The results were as follows: (1) In animals in which the Billroth II resection had been performed the capacity for absorption of fats studied up to two months after the operation was diminished compared with that of normal animals; this diminution, however, was of slight degree. (2) The same animals showed no change in their capacity for absorption of proteins. Glycosuria was never noted. (3) Animals with a permanent pancreatic fistula showed a slight diminution of the external secretion of the pancreas for a few days after Billroth II gastric resection, but subsequently the secretion increased until by the eighteenth day the normal quantity was re-established, while the lipolytic function of the pancreatic juice did not show any change. The only modification noted was that the maximum velocity of secretion was observed from the third to the fifth hour of digestion instead of at the second hour, as is found in the stage before operation and in the normal condition. (4) The histological structure of the pancreas on examination three months after the operation did not show any changes.

471. Insulin in Surgery.

V. ORATOR (*Deut. Zeit. f. Chir.*, March, 1926, p. 57), as the result of his experience of insulin in about eighty cases at the Graz University surgical clinic, comes to the following conclusions. When an operation is indicated in a diabetic patient the urine should be made as free as possible of acetone and sugar by insulin. The operation itself should be performed without a general anaesthetic, and an intravenous injection of glucose and insulin should be given at the same time. By this means the length of the starvation periods can be reduced and post-operative acidosis prevented. Apart from the general treatment of diabetes, insulin in surgery can be employed with advantage in the following conditions: (1) Convalescence from operation in greatly debilitated persons—for example, after gastric resection, prostatectomy, and nephrectomy. (2) As an intravenous injection in association with glucose for the nourishment of cachectic patients, especially when feeding by mouth, should be restricted or stopped entirely, particularly after severe gastric resection, intestinal obstruction, and perforative peritonitis. Similar experiments with insulin in inoperable conditions, such as multiple caries, tumour metastases, and septicaemia, were ineffective. Intravenous injections of insulin and glucose proved of value in acidosis following inanition, shock, and operations. Insulin was of no avail in acidosis following pancreatic diseases and uraemia. Insulin was of value in shortening the period before operation in cases of severe Graves's disease and in hastening recovery after the operation. Orator adds that insulin is not wholly without danger for subjects of severe arterio-sclerosis.

472. Treatment of Pott's Disease in Adults.

L. BÉRARD and J. CREYSSEL (*Lyon Chir.*, January–February, 1926, p. 1) discuss the treatment of spinal caries in adults by Albee's operation and indicate how the best results may be obtained with the least risk to the patient. They advise a lateral or curved incision in preference to the median incision, since thereby pressure on the scar is avoided when the patient lies in bed. A lateral graft has also proved satisfactory in their cases, and they do not consider it necessary to use the bone grafts, one on either side. The bone graft has been taken from the tibia, and this is the strongest and best graft obtainable in their experience. A general anaesthetic was always employed and the operation divided into three stages: First of all the graft is cut with an Albee saw; it should always be of good length. The patient is then placed so that he lies on his abdomen, and the spinal site is prepared to receive the bone graft. Finally, the graft is applied to the denuded bony surface. Where the spinal curvature is very marked the graft is nicked, so that it will bend and adapt itself; it is fixed in position with catgut sutures. The patient is kept in bed for from six weeks to two months; in bad cases a longer time may be necessary. The chief complications after operation are infection of the wound, while in rare cases the graft may become loose or even fracture. The authors find, however, that most cases have a successful issue, with no untoward result, and it is exceptional to meet with any serious complication after this operation.

Therapeutics.

473. The Treatment of Diphtheria.

H. HECKSCHER (*Ugeskr. f. Laeger*, February 18th and 25th, 1926, pp. 149 and 187) analyses the diphtheria statistics of the Blegdams Fever Hospital in Copenhagen during the period 1921–25, in which 4,819 cases were treated. The cases of diphtheria of the larynx without stenosis were included in this analysis, but not the cases of genuine croup. Antitoxin was given to about two-thirds of all the cases. An attempt was made to give the serum by the intravenous route as a general rule, but the choice between the intravenous and the intramuscular routes had, in practice, to depend on the size and position of the veins in the arm, the patient's condition, and the amount of the required dose. When a large dose was required, a little was given by the intravenous route and the rest by an intramuscular injection. The amount of the intravenous doses ranged from 10,300 to 42,500 units, the minimum and maximum intramuscular injections being 27,900 and 193,000 units respectively. In two cases which terminated fatally serum disease proved a dangerous complication. The mortality was the lowest on record. Of the 96 patients who died, 28 succumbed to associated conditions such as pneumonia and tuberculosis. There were 11 other patients who were moribund on admission, and who died within twenty-four hours of it. Thus there remained only 57 deaths which were due to the diphtheria, and which occurred in spite of hospital treatment—a mortality of 1.2 per cent. This low mortality was the more satisfactory as over 10 per cent. of all the cases were most severe. Discussing the possibility of further reducing the mortality, the author advocates closer co-operation between the general practitioner and the hospital, and he suggests that every patient with a pseudo-membranous sore throat and in an alarming general condition should at once be given antitoxin without the delay entailed by waiting for a report on the bacteriological examination. He adds that this rule is the more necessary as the bacteriological examination is not infrequently negative in just those cases of diphtheria which are most serious.

474. Insulin in Skin Diseases.

M. FEROND (*Le Scalpel*, March 6th, 1926, p. 221) maintains that since it has been ascertained that insulin favours, not only the metabolism of carbohydrates, but also that of fats and, probably, of some stable bodies like cholesterin, there has been to some extent a rational indication for its use in dermatology. In 1925 he had to treat six patients whose legs were almost covered by large varicose ulcers. Unexpectedly rapid benefit followed a combination of injections, compresses, and an ointment of insulin, especially in patients who were diabetic or hyperglycaemic. These results were sometimes transitory and the cases tended to relapse if the circulatory conditions were disturbed. Psoriasis is a disorder in which certain patients show a chronic excess of glucose or of cholesterin in the blood; in eighteen cases of the kind the author obtained exceptionally good progress with insulin treatment. In one case the cholesterinaemic figure was reduced from 0.24 per cent. almost to normal (0.16 per cent.).

475. Vaccine Treatment of Typhoid Fever in Children.

N. SPYROPOULOS (*Arch. de Méd. des Enf.*, March, 1926, p. 150) records his observations on 50 cases of typhoid fever in children aged from 2 to 15 years who were treated by intravenous vaccine therapy in the pediatric clinic of Athens University, an autogenous vaccine being used in the majority of cases. The results were as follows: (1) In 32 cases a single intravenous injection yielded an immediate result, shown by a gradual fall of temperature to normal and a remarkable improvement in the general condition. Convalescence was rapid in all. (2) In 12 cases a single intravenous injection produced only an encouraging result, shown by a remarkable improvement in the general condition and a shortening of the course of the disease. (3) In 4 cases the first injection had little effect, but a second injection two to four days later had a decided result. (4) In 2 cases the effect was *nil*. The author maintains that the reaction produced by an intravenous injection is much better tolerated in the child than in the adult, and that the earlier the vaccine is given the better are the results.

476. Protein Therapy in Eye Infections.

H. F. SHORNEY (*Med. Journ. Australia*, February 13th, 1926, p. 177) discusses the use of protein therapy in eye diseases, and advocates the use of cow's milk injections, especially in the treatment of gonorrhoeal ophthalmia. After boiling the milk for not more than five minutes the injection is made deeply into the gluteal region in doses of 2 c.cm. for a newborn infant, 5 c.cm. for a child of 6, 8 c.cm. for a child of 10, 10 c.cm. over that age, and 15 c.cm. for adults. If there is no good reaction, as evidenced by a rise of temperature from 101° to 102°, the dose is repeated the next day but omitted on the third day, though if necessary 10 to 15 c.cm. may be given on the fourth and fifth days in severe cases. Shorney has found the routine use of milk injections in perforating wounds of the globe very useful in preventing the occurrence of sympathetic ophthalmia, and excellent results were obtained in acute inflammations of any part of the uveal tract. He states that an injection given early in wound infection after cataract extraction may avert a panophthalmitis, but that it is inadvisable to give an injection as a prophylactic after every cataract operation with a view to anticipating infection, because the resulting reaction is not good for elderly people. The injections should be given with the usual aseptic precautions and the milk should not be boiled for more than five minutes; longer boiling coagulates and changes the albumin, interfering with the resulting reaction.

Neurology and Psychology.

477. The Pupils in Somatic and Visceral Disorders.

J. BYRNE (*Journ. Nerv. and Ment. Dis.*, February, 1926, p. 105) has previously shown that on the afferent side pupil dilatation is effected mainly by the affective (pain-bearing) system of nerves, whereas the mechanism of pupil contraction is activated mainly by the critical (proprioceptive) system. He found experimentally that after lesions of the peripheral somatic nerves such as the sciatic and the brachial plexus, true paradoxical dilatation and pseudo-paradoxical dilatation might be observed in the pupil having the closer functional relations with the injured nerves. He considers the pseudo-paradoxical phenomenon to be more clinically important than the true paradoxical form, which can only be elicited after the injection of adrenaline and a period of incubation of eight to twelve days after lesions below the umbilicus and of five to eight days after lesions above that level. The pseudo-paradoxical phenomenon has no period of incubation and may be seen within twenty-four hours after the lesion; it persists for weeks, although it may diminish or disappear during the period in which the paradoxical dilatation can be elicited. During or immediately after lesions such as moderately crushing one sciatic nerve, the contralateral may be the larger pupil, but a few hours later, when the effects of the stimulus have passed off, the contralateral will be found to be the smaller pupil if the animal be quiet and untouched. On slight excitement, however, the contralateral becomes at once the larger pupil. This is the pseudo-paradoxical phenomenon, which resembles the true paradoxical but which, in its most characteristic part (namely, the dilatation), has a mechanism altogether different from that of true paradoxical dilatation. In the instance given the diminution in size of the contralateral pupil when the animal is quiet is explained by diminished inflow of dilator impulses as the result of functional impairment, in the bodies mostly, of the primary affective neurones (axonal reaction phenomena) more seriously involved in the operative lesion, whereas the dilatation upon excitement results from overdischarge of the less seriously injured (overstimulated) primary affective neurones. In somatic or visceral disease it is often possible to elicit the dilatation component in a quiescent patient by pressure upon the diseased part. Byrne states that, in general, lesions of one lung, kidney, ovary, or testis, and unilateral lesions of such tubular viscera as the heart, great vessels, and gastro-intestinal tract, induce the pseudo-paradoxical phenomenon in the homolateral pupil when the organ injured receives its afferent supply through nerves which took origin chiefly from segments above the tenth thoracic level. The phenomenon occurs in the contralateral eye where the affected organ derives its original afferent supply from nerves which mostly left the cord below that level, and this is complementary of the rule found to obtain in somatic lesions. As a localizing sign of visceral disease the pseudo-paradoxical pupil phenomenon is to be taken in conjunction with referred pain and the associated areas of referred hyperalgesia, superficial and deep, the areas of deep hyperalgesia having as much or even more significance than the areas of superficial hyperalgesia. The author instances several cases of the occurrence of this pupil phenomenon. Among the somatic lesions are: (1) Laceration of the fifth, sixth, and seventh left cervical roots; in the painless intervals the left was the smaller pupil; during paroxysms of pain the left was dilated much more than the right. (2) Bullet wound of the right tibial nerve; the bullet was removed by operation, and for some time after the patient had intense hyperalgesia in the region of the skin distribution of the tibial nerve, during which period the left was usually the larger pupil. Two years later, when the hyperalgesia had cleared up, the left was the smaller pupil and the right foot showed marked sensory impairment. The visceral lesions include: (1) Ulcer of the anterior (left) wall of the stomach; during a paroxysm of pain the left was the larger pupil. (2) Left cystic ovary. During freedom from pain the pupils were equal or the left was slightly the smaller; pressure on the tender ovary caused both pupils to dilate, the left much more so than the right. (3) Right traumatic epididymitis; when the patient was at rest the pupils were equal or the left was slightly the smaller, but on squeezing the right epididymis the left pupil became at once the larger. (4) Cardio-aortic disease with pseudo-angina attacks; in the intervals between attacks the left was the smaller pupil, while during attacks and for a short time thereafter the left was the larger pupil.

478. Pathogenesis and Treatment of Mongolism.

J. VAS (*Jahrb. f. Kinderheilk.*, December, 1925, p. 51) states that in the out-patient department of the Budapest University children's clinic mongolian imbeciles constitute 0.05 per cent. of all the out-patient cases and 22 per cent. of all mental defectives. According to English statistics mongols form 5 per cent. of all mental defectives, and in Dutch statistics the incidence is 5.5 per cent. As, however, the English and Dutch statistics include older children and adults, and Vas's figures apply to young children only, the incidence of mongolian imbecility is probably the same in all three countries. Various causes have been suggested for the occurrence of mongolism. Probably the etiology is not identical in all cases; it embraces factors which not only exclude the development of a healthy foetus *ab ovo*, but also give rise to a number of various abnormalities in the developing organism as well as mongolism, such as congenital heart disease, congenital cataract, congenital dislocation, syndactylia, atresia, and the like. Not infrequently transitional forms are observed in which mongolism is accompanied by myxoedema or an endocrine disturbance, such as infantilism or acromegaly, in the same individual. A closer study of the mongolian syndrome also reveals the presence of endocrine changes. The hypotonus, which not only involves the limb muscles but is also generalized, suggests suprarenal hypofunction, and the hypoplasia of the genitals indicates a hypofunction of the genital glands. As mongolism appears to be associated with endocrine disturbance, various observers have employed opotherapy and reported mental and physical improvement as the result. Pineal gland extract has been used by Dana, Berkeley, Goddard, and Cornet, thyroid preparations by Thursfield and Stöltzner, thymus extract by Barnes, and a combined extract of pineal gland, thyroid hypophysis, and testes by Berkeley. Vas himself employed a preparation consisting of extracts of thyroid, testes, suprarenal, and pituitary for males, and thyroid, ovary, suprarenal, and pituitary for females, in doses of a half to two tablets weekly. Generally speaking, a certain progress was observed both mentally and physically. As only eight children aged from 6 months to 6 years were treated, the results could not be regarded as conclusive, but seemed sufficiently encouraging to justify a further trial.

479. Juvenile Mental Disorder.

MÖNKEMÖLLER (*Med. Klin.*, February 5th, 1926, p. 202) maintains that mental derangement in the young has increased much in the last decade, owing to the many and diverse evil influences of the war. Premising that all classifications of mental abnormality are rather artificial, he distinguishes three types—the depressive, the manic, and the indolent. Those of the first type are by nature shy children, sensitive to the sad side of life, feeling isolated even in their home circle, intelligent and proficient scholars, fond of solitary meditation. Unready in an emergency, they fail in practical matters, being haunted with the fear that some task will be required of them that they are unable to perform. They do not tend to suicide, however. As these incline to melancholia, so do the manic children to a slight chronic mania. These latter are always in excited motion, have always something to say, want to take part in everything and finish nothing. Lack of power of attention makes them fail at school, and they sleep very poorly. As they grow up they tend to be happy-go-lucky, alcoholic, and sexually uncontrolled. The children of the indolent type are dull, indifferent, and unpopular. They are unmoved by adverse school reports and do not join in games. In later life they come little into conflict with society.

Obstetrics and Gynaecology.

480. Ovarian Malignancy.

R. F. MATTERS (*Med. Journ. Australia*, February 13th, 1926, p. 181) considers ovarian malignancy with special reference to Krukenberg tumours, and states that carcinoma in this site is generally secondary to carcinoma elsewhere, while sarcoma is usually primary. The type of carcinoma known as the Krukenberg tumour is a pure carcinoma always secondary to carcinoma of the gastro-intestinal tract or of the gall bladder. The ovary is possibly a very receptive medium for invasion of malignant cells, and therefore such cancer cells, falling into the abdominal cavity, may be more liable to produce metastatic growths in the ovaries than elsewhere. These cancer cells, being of the secreting type, are said to continue to produce secretion which distends the cells, pushing the nuclei to one side and so forming the Krukenberg "signet ring" cells. In several cases it has been shown by Sampson Handley that a primary cancer of the breast has produced secondary deposits in the ovary, the cancer cells travelling through the fascial planes to the abdominal cavity. Since it would seem that the ovary must be regarded as a possible site for metastases in abdominal malignant diseases, Matters concludes that before considering an ovarian carcinoma as primary the possibility of its being secondary to a uterine, abdominal, or breast carcinoma must be eliminated.

481. Insufflation of the Fallopian Tubes.

P. ROMEO (*Riv. d'Ostet. e Ginecol. Prat.*, February, 1926, p. 92) is more favourably impressed with the diagnostic than the therapeutic utility of insufflation of the Fallopian tubes by Rubin's method. He records a series of 241 cases of sterility lasting three years or more after marriage; in 12 per cent. there was a history of gonorrhoea and in 7 per cent. of syphilis. Unilateral tubal obstruction was found in 8 per cent. and bilateral in 3 per cent. Within the seven months following treatment by insufflation 4.8 per cent. of the patients became pregnant, and except in two syphilitic cases went on to term. Of the remaining cases pregnancy followed in 9 per cent. within the seventh to fourteenth months after insufflation—apparently in response to medical treatment, topical applications, minor operative interventions, or opotherapy. Within the ensuing three months another 7 per cent. became pregnant. In testing tubal patency Romeo dispenses with radiographical examination, and instead of relying on locating the pain prefers to draw his diagnostic conclusions from careful bimanual examinations before insufflation and immediately afterwards, the cervix being temporarily occluded in certain cases. With regard to contraindications the author believes that there is greater risk of lighting up old pelvic inflammation in apparently spent streptococcal than in old gonorrhoeal infections.

482. Van den Bergh's Test in Pregnancy Diseases.

H. EUFINGER and C. W. BADER (*Zentralbl. f. Gynäk.*, February 27th, 1926, p. 514) have estimated by van den Bergh's test the bilirubin in the serum of 123 patients during the last months of gestation, labour, and the puerperium. They find that in normal pregnancy a direct prompt reaction is never given, but the indirect test shows somewhat increased amounts of bilirubin, reaching their highest values during labour. Applying the test to cases of pernicious vomiting, they find it to be of great value in distinguishing the organic from the functional components of the disorder. Of 20 cases of hyperemesis gravidarum 8 gave a direct prompt van den Bergh reaction and were characterized by a clinical course of great severity; the other cases quickly responded to ordinary therapeutic measures. In certain cases in which the induction of abortion appeared imperative on clinical grounds a diminution in intensity of the direct reaction was taken as justifying conservative treatment and the favourable expectations were fulfilled. In 10 cases of pregnancy nephropathy a negative reaction was invariably found, but of 15 cases of eclampsia 8 gave a positive direct reaction. All patients of the pre-eclamptic state in whom the direct test was positive were found subsequently to suffer from eclamptic convulsions in spite of treatment by rapid termination of pregnancy or by Stroganoff's method; in the overwhelming majority of other pre-eclamptic cases convulsions were avoided. The authors recommend that the van den Bergh test be performed in all cases of pregnancy toxaemia.

483. Pregnancy, Protein Shock, and Hepatic Colic.

G. PARTURIER (*Rev. de Méd.*, No. 7, 1925, p. 614) states that while pregnancy creates a predisposition for cholecystitis, and especially for cholelithiasis, gall-stone colic is rare until after delivery, when it reaches its greatest frequency in women. Of 26 women who were subject to gall-stone colic only 3, or 11.5 per cent., complained of any symptoms referable to the gall bladder during pregnancy, whereas 23 of the 26 women during their pregnancy lost all symptoms suggestive of gall-stone colic, but had a recurrence of them after full-term delivery or miscarriage. Widal, Abrami, and de Gennes have made similar observations in the case of asthma, and Jean Lépine in the case of epilepsy. Since 1907 Wallich has drawn attention to the peculiarly sensitive condition of women at the time of delivery, in contrast with their stability in pregnancy. He was the first to describe the condition of puerperal shock, which is characterized by a sudden onset, transient duration, profound asthenia, cold sweat, pinched expression, anticipation of imminent death, considerable fall of blood pressure, and subnormal temperature. While pregnancy entails a local immunity which prevents the uterine mucosa from undergoing its usual degeneration, as well as a general immunity to certain infections and anaphylactic shocks, gall-stone colic may be regarded as an anaphylactic phenomenon which is rare during the period of ovarian inactivity, but develops as soon as the genital gland resumes its activity after delivery. A fresh analogy is thus found between gall-stone colic and what Widal and his school have described under the name of "protein shock."

Pathology.

484. The Coagulation of Egg-yolk by a Bacterial Diastase.

E. LAGRANGE (*Ann. de l'Inst. Pasteur*, March, 1926, p. 242) relates how eggs exported from China are frequently spoiled by reason of a coagulation of the yolk which occurs on the journey to Europe. The eggs are broken and the whites separated from the yolks. The latter are beaten up and sifted, placed in metal boxes in cold storage, sometimes treated with a salt such as sodium fluoride, sodium benzoate, or sodium borate, and finally packed in barrels for export. On arrival in Europe many of them are found to be completely coagulated and to give out a sour smell. The author has shown that this coagulation is due to the proliferation of an organism which he calls *B. sinicus*. Besides secreting a diastase acting on the yolk, it forms acetic and butyric acids. To test the action of the diastase a 1 in 5 to 1 in 20 emulsion of the yolk in saline is placed in a tube, and a small quantity of a filtered broth culture of the organism is added to it. The homogeneous emulsion first becomes turbid and then commences to flocculate; small particles separate out and either collect into a surface pellicle or sink to the bottom. The liquid that remains is perfectly clear. Heating of the filtrate to 56° C., or the addition of alkali or acid, destroys the diastase or prevents its action. The effect of salts on the process of coagulation has been studied. The coagulation occurs in an oxalated medium in the entire absence of calcium in contrast with the coagulation of blood plasma or of milk. The author proposes to call this enzyme vitellase; the substance it acts on vitellogen; and the coagulated protein vitellin. The diastase acts only as a coagulant; it does not digest the egg-yolk.

485. The Spleen and Basal Metabolism.

G. C. PERACCHIA (*Arch. di Patolog. e Clin. Med.*, February, 1926, p. 53) has studied the effect of removal of the spleen in dogs on their rate of metabolism. Preliminary experiments showed that for dogs of 5 kilograms the heat loss was about 2.1 calories per kg. an hour; the variation in different animals was slight, not exceeding 5.8 per cent. Twenty animals were chosen and divided into two groups: in the first group the animals were young and their spleens were probably in full functional activity; in the second group they were old and their spleens showed signs of atrophy. Twenty days after splenectomy, when the animals had recovered, estimations showed that in the first group the basal metabolism had risen by 20 to 25 per cent.; it persisted at this level for five to six weeks and then fell very slightly. In the second group the basal metabolism rose only about 12 to 16 per cent. A similar rise after splenectomy was found in a child by Leotta. Peracchia deduces from these results that the spleen, especially when young and active, has a controlling influence on metabolism, and suggests that this action is probably due to the production of an internal secretion. It has been held by some authors that the spleen has an antagonistic action on the development of the sexual organs. Splenectomy performed in young persons may result in hypertrophy of the testicles or ovaries. The author has found that the effect of castration in dogs is to lower the basal metabolism to about the same extent as splenectomy raises it. He therefore concludes that the spleen is an endocrine gland, secreting a hormone that depresses basal metabolism and retards the development of the sexual organs.

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

486. The Inheritance of Peroneal Atrophy.

MADGE T. MACKLIN and J. T. BOWMAN (*Journ. Amer. Med. Assoc.*, February 27th, 1926, p. 613) report a case of peroneal atrophy, with special reference to the heredity factor. A man, aged 22, presented the characteristic atrophy of the peroneal and calf muscles in contrast with the normal musculature of the trunk, face, and arms. The family history through five generations showed that of 101 persons 21 were so affected, the disease not being transmitted by persons who did not have the disease either manifest or latent. From the chart of the five generations the conclusion is drawn that it is possible for a parent to transmit the disease to offspring and for the parent to die before developing it, though, had he lived long enough, the condition would have become manifest. Thus, persons in whom no signs of the disease have yet shown themselves may procreate offspring to whom they transmit the complaint. The authors state that males and females are equally affected and probably transmit equally; the presence of the disease does not appear to affect longevity. It appears that half the offspring of an affected parent are apt to be affected provided the family is large and lives long enough to develop the disease; this applies to those in whom the disease is present at the time of procreation as well as to those who have not yet developed it but who have the hereditary taint. The condition is apparently dominant to the normal and is not sex-linked. Eugenically it is pointed out that it would be better for those who belong to affected families, whether they themselves are affected or not, to refrain from having children, as this is the only way to eradicate the disease, and the mental burden will be considerably lightened for such by a clear explanation of the disease.

487. The "Fourth Disease" or Scarlatinella.

K. HOCHSINGER (*Wien. klin. Woch.*, February 4th, p. 154, and February 11th, 1926, p. 186), who states that he has seen several cases of the "fourth disease," especially during the last three years, draws the following distinctions between it and scarlet fever: (1) The onset of the fourth disease is not accompanied by vomiting or considerable gastric disturbance. (2) The facial erythema in the fourth disease is not diffuse, but consists of bright red or pink papules, which become confluent in a few hours. The circumoral and circumnasal regions are as a rule free of erythema, but are never so sharply marked off from the erythematous areas as in true scarlet fever and never present an icteric tint. (3) The general involvement of the bucco-pharyngeal cavity characteristic of scarlet fever is absent, but there is only a slight redness of the palatal and tonsillar mucosa, and even this is often completely absent. During the first two days the tongue has a greyish coating, but rapidly becomes clean without showing a strawberry appearance or desquamation. Cutaneous desquamation and the characteristic late syndrome of scarlet fever, consisting in pyrexia, cervical adenitis, and nephritis, are completely absent. The eruption is always of a bright pinkish-red colour and consists of minute papules, which become thickly spread over the trunk and extremities in twenty-four to thirty-six hours, and are only of short duration, beginning to fade in forty-eight hours and disappearing completely at the end of four days. The incubation period is about a fortnight. An attack of the fourth disease confers no immunity to scarlet fever. The distinction of the fourth disease from rubella is much easier than from scarlet fever. In the first place, the enlargement of the occipital glands, which is always present in the prodromal stage of rubella, is absent in the fourth disease. Secondly, the initial catarrhal symptoms of rubella, mild as they are, are absent. Thirdly, the morbilliform appearance of the rash is absent. Hochsinger suggests substituting the term "scarlatinella" for "fourth disease" on the analogy of "varicella" and "variola."

488. The Possibility of curing Diabetes.

M. LABBÉ (*Bull. de l'Acad. de Méd.*, April 5th, 1926, p. 336) records twenty-four cases of diabetes treated for two or three years with insulin, and discusses the question whether there is yet any definite evidence that diabetes is curable, and that the islands of Langerhans can be regenerated. Of his twenty-four patients twelve had died at the end of two or three years, but this, as he points out, represents a 50 per cent. improvement on the pre-insulin days, when all such patients died within a year or two. The deaths in his cases were due to coma in five, to suppuration and infection in three, and to pulmonary tuberculosis in four. Neglect of the insulin treatment after a temporary improvement was the cause of coma and death, particularly in the summer months when supervision of the patients was less easy. Labbé concludes that, though prolonged treatment by insulin does not arrest the progress of grave diabetes, yet it retards it considerably. In three of his cases, however, the disease appeared to be progressively overcome, the patients improved steadily and seemed to be well on the road to complete recovery. Labbé, therefore, considers that there is some indication of the possibility of diabetes being cured; he doubts whether histological regeneration of the pancreas occurs, though he agrees that evidence is accumulating that functional regeneration can be established.

489. The Paraplegic Forms of Epidemic Encephalitis.

C. REBOUL (*Thèse de Montpellier*, 1925, No. 69), who records several illustrative cases, comes to the following conclusions: Epidemic encephalitis, far from being confined to the midbrain, may show a predilection for the spinal cord, spinal roots and nerves, thus giving rise to spinal and peripheral forms of the disease. Among the spinal forms the following clinical types may be distinguished: those resembling disseminated sclerosis, acute anterior poliomyelitis, spastic paraplegia, Landry's disease, and tabes. Peripheral involvement gives rise to radiculitis or polyneuritis, which may be confined to the lower limbs, involve all four limbs, or take on an ascending course. Lastly, in some cases the virus may act on the muscles and nerve terminals, thus creating a neuro-muscular form of the disease. The commonest forms—or, at least, those of which most examples have been recorded—are the radiculitis and polyneuritis forms. The disease usually ends in complete recovery, even when the attack appears to be particularly violent. The ascending form is the most dangerous.

490. Bradycardia due to Athletic Training.

E. KAUF (*Wien. klin. Woch.*, February 18th, 1926, p. 212) conducted experiments on athletes to ascertain the cause of the bradycardia so often seen in the trained sportsman. He examined 35 men, ranging in age from 19 to 32, who had trained for various sports (football, running, boxing, rowing) over a period of one and a half to five years. After a rest period of five minutes, the pulse frequency was counted during the next five minutes and the average rate determined. The athlete was only then informed that he was to have an injection, and 1 mg. of atropine was given subcutaneously. In 33 cases no definite increase in the pulse frequency was noticed, while the non-trained adult showed an increased frequency from 18 to 46. At a subsequent date 9 of the men were injected with 2 mg. of atropine, and rise in pulse frequency of an average of 25 (5 to 35) was noted. These experiments suggested that the bradycardia was due to increased vagus control, which could only be removed by twice the amount of atropine required to remove the vagus control in the non-trained individual. To ascertain whether the accelerator nerves to the heart played a part in this bradycardia, the author injected 1 mg. of adrenaline subcutaneously in 7 of the cases; this was followed by an increase in the pulse frequency of 5 to 30, which figures are comparable with those occurring in untrained persons. The author therefore concludes that as the accelerator mechanism is normal and that twice the amount of atropine is required to remove the vagal control, in athletes the vago-accelerator ratio is pushed towards the vagal side.

Surgery.

491. Submucous Resection of the Nasal Septum.

C. C. FOX (*Therapeutic Gazette*, January 15th, 1926, p. 6) states that the operation for submucous resection of the nasal septum is comparatively free from complications even though the structures involved are in close proximity to areas very sensitive to injury and infection. Complications may arise before the operation is begun if the patient has an idiosyncrasy towards cocaine. Fox points out that a great number of these patients are very nervous and excited and should therefore be given more consideration than is usually granted them. The incision itself is rarely likely to lead to

complications, but the elevation of the muco-perichondrium or removal of the deflected cartilage or bone requires particular care. He states that it is quite possible to carry the dissection too far back and thus lay bare the cribriform plate of the ethmoid bone, while the elevator may even be carried through the plate. Haemorrhage is almost a negligible factor except where a blood dyscrasia is present. Infection is a more common occurrence, the organisms being carried back into the cranial cavity along the courses of nerves, blood vessels, or lymphatics, and giving rise to meningitis; the organisms most commonly found are pneumococci and streptococci. Septal abscess is not uncommon, and secondary complications of pharyngitis, tonsillitis, and ear affections may arise. In order to minimize the complications he suggests that the field of operation should be prepared by the use of nasal antiseptics for several days previously, the operation being performed under aseptic conditions. Any packing of the cavity should not be too tight or protracted. After the operation, when the packing has been removed, daily treatment with saline and oil solutions will prevent infection and assist healing.

492. Mesenteric Cyst in a Child.

P. MATHIEU (*Bull. et Mém. Soc. Nat. de Chir.*, February 13th, 1926, p. 164) records a case of a mesenteric cyst in a child aged 3 years and 6 months, treated by operation. He points out that lymphatic cysts in the mesentery of children are not uncommon, and that they are probably similar in origin to the lymphatic tumours sometimes seen in the neck. These cysts exhibit the curious characteristic that they may increase in size and then suddenly diminish in volume. Mesenteric cysts are liable to certain complications, the chief being haemorrhage into the cyst. The diagnosis is frequently difficult on account of the associated digestive disturbance, pain, and pyrexia, and if the tumour is not recognized as such a diagnosis of acute appendicitis may be made. In the case recorded the condition was diagnosed as a mesenteric or retroperitoneal cyst. Extirpation of the cyst itself is the ideal treatment, but this is often difficult or impossible because of the blood vessels of the mesentery. If the vessels are accidentally divided a resection of intestine may be inevitable. In such cases it may be safer to "marsupialize" the cyst; this, however, has the disadvantages of delayed convalescence, due to prolonged discharge and suppuration. In recorded cases, however, this appears to be the safer procedure and has a lower mortality than extirpation.

493. Fracture Dislocation of the Cervical Vertebrae.

D. GIORGACOPULO (*Zentralbl. f. Chir.*, February 27th, 1926, p. 533) describes the cases of two young men, aged 25 and 17, who dived head first into the sea and struck their heads on the sandy bottom. The first patient did not go to hospital immediately, but on the next day, as he had persistent pain in his neck, increased by movement, he went to hospital, and a skiagram showed a fracture dislocation of the arches of the fourth and fifth cervical vertebrae. He had no symptoms of compression of the spinal cord. A fixation apparatus was applied and worn for a fortnight, after which he was discharged. The second patient sustained a precisely similar injury. He was stunned at the time, but on recovering consciousness felt no pain in his neck. Next day, however, he went to hospital, where a skiagram showed a similar fracture dislocation. The same treatment was employed as in the first case.

494. Diagnosis of Ulcers of the Leg.

H. GOODMAN (*Amer. Journ. Surg.*, March, 1926, p. 63) brings forward certain points in regard to the localization of ulcers of the leg, and remarks that no attention appears to have been drawn to the importance of noting, as a point in differential diagnosis, whether the right or left limb is involved. With regard to the relations of the veins and arteries of the legs, he points out that the left common iliac vein is compressed against the fifth lumbar vertebra by the right common iliac artery; clinically, thrombophlebitis occurs in 90 per cent. of cases on the left side, while varicocele is also more common on the left. Goodman has carefully investigated a series of 64 cases of ulcer of the leg, and states that a diagnosis of syphilitic ulcer will be correct twice out of three times if the lesion is on the lower right leg alone, and of non-syphilitic ulcer if it is on the left leg alone. In cases of ulcers of both legs the diagnosis is not possible except by a Wassermann test.

495. Early Operation for Club-foot.

H. L. ROCHER (*Gaz. hebd. des Sci. Méd. de Bordeaux*, February 28th, 1926, p. 140) mentions that in equino-varus of congenital origin he used to prescribe at first massage and corrective manipulations, and fixing in the improved position by flannel bandages, or even by a splint of wood. Only when the infant was 5 or 6 months old would he perform an operation, by which time all the adduction was already corrected and some of the supination. The operation consisted in dividing the Achilles tendon and putting the foot up in plaster. Latterly, however, it appeared to him that the bandage seemed to lessen the plasticity of the parts, and that as it was necessary to make allowances for negligence in carrying out the preliminary treatment it would be better to operate under a month old if possible. He describes a case of double club-foot in which the operation mentioned was performed on one side at 20 days and a week later on the other; the result was very good.

Therapeutics.

496. Insulin in Infantile Malnutrition.

L. FISCHER and J. L. ROGATZ (*Amer. Journ. Dis. Child.*, March, 1926, p. 363) have investigated the use of insulin in twenty-seven malnourished infants. Three types were considered. Infants with acute atrophy and intoxication and requiring an immediate effect by the quickest possible absorption to save life were treated by injections into the longitudinal sinus through the anterior fontanelle of one-third to one-half ounce of a 20 per cent. glucose solution per pound of body weight, to which had been added 15 units of insulin per 100 c.cm. of solution. In cases of atrophy in which acute intoxication had not yet set in insulin was administered with 15 per cent. glucose intraperitoneally or subcutaneously. Dystrophic babies with stationary weight were treated with insulin subcutaneously or intracutaneously in conjunction with feedings. In 63 per cent. of the cases marked gain in weight and improved nutrition resulted, and of five cases of acute atrophy with intoxication four recovered. No bad effects were observed, and in those cases reported as successful there were no changes in diet or management, other than the use of insulin combined with glucose, to which improvement could have been attributed. The authors add that repeated small doses of insulin appear to be cumulative, culminating in a rise of temperature, anorexia, and loss of weight. They think that the effectiveness of the treatment in properly selected cases in their hands renders it worthy of trial when other methods of feeding and management have failed.

497. The Indications for Acetylorthocresotinic Acid.

G. CARRIÈRE and E. GÉRARD (*Bull. Soc. de Thér.*, March 10th, 1926, p. 77) state that acetylorthocresotinic acid, which is a higher homologue of acetosalicylic acid, presents the advantage over the latter in that it does not cause any gastro-intestinal disturbance or pharyngeal pain, and is not affected by the gastric juice, but becomes dissociated on contact with the intestinal juice, setting free a physiologically active orthocresotinic acid. The drug possesses undoubted anti-rheumatic and analgesic properties, and without being a hypnotic properly so called produces sleep. The authors' results were excellent in chronic rheumatism and neuralgia of all kinds, from toothache to sciatica. The drug was very useful in the thoracic pain of tuberculosis. The results were much less definite in the insomnia and general aching of febrile patients. Very favourable effects were obtained in migraine and asthma. The drug was employed in doses of 0.5 gram given in cachets. As a rule the effect produced lasted for seven or eight hours, after which another cachet was required. A dose of 2 grams a day is usually sufficient, but this may be considerably exceeded if necessary, as the drug is only very slightly toxic and is rapidly eliminated from the system.

498. Absorption of Atophan through the Skin.

H. HORSTERS and H. ROTHMANN (*Med. Klin.*, April 9th, 1926, p. 582) report that atophan is effective when given by inunction; they have tried it in chronic rheumatism and lumbago, where it was not tolerated by the stomach. They used two kinds of ointment—one with a salicylate and the other with a camphor base. Three chemical tests of the urine were made at varying periods after the application of the drug. In all cases they found that the drug was excreted three to six hours later, and that a definite improvement in the patients' condition resulted. The authors particularly emphasize the point that the ointment must be rubbed in not only over the affected part but over a considerable area of the body.

499. Colloidal Iodine in Tuberculosis of the Female Genital Organs.

E. TONEFF (*Gynécol. et Obstét.*, 1926, xiii, 3, p. 205) writes favourably of the effects of intramuscular injections of colloidal iodine in cases of abdominal tuberculosis coexisting with tuberculous disease of the female genital organs. This

treatment he believes to be preferable to laparotomy in cases with ascites, and to the performance of more or less radical operations on the adnexa; in any case the iodine treatment deserves, he thinks, trial before operation. In a number of cases reported three to sixteen injections given at two- to five-day intervals have been followed by rapid disappearance of peritoneal effusions, marked reduction in size of adnexal tumours, return of the menses, and speedy restitution of general health. The treatment is said to be contraindicated by the presence of active tuberculosis in the lungs.

500. Ammonium Tartrate in Lime Burns of the Cornea.

E. WOLFF (*Brit. Journ. Ophthalmol.*, April, 1926, p. 196) describes two cases of lime burn of the cornea treated by a 10 per cent. neutral ammonium tartrate solution with very good results. Lime burns of the cornea are usually of grave significance. The caustic effect of the lime destroys the corneal tissue, and the lime combines with the tissue of the cornea, depositing particles of calcium carbonate. It is this second element of the condition which can be so markedly improved by means of neutral ammonium tartrate solution; this converts the insoluble calcium carbonate into the more soluble calcium tartrate, which is washed away. The reaction occurs slowly, so that prolonged treatment is necessary. The cornea is washed with the solution by means of an undine for fifteen minutes daily. This treatment should be continued for some months.

501. Administration of Arsphenamine.

J. H. STOKES (*Journ. Amer. Med. Assoc.*, March 20th, 1926, p. 840) refers to the complaints made by patients receiving intravenous injections of arsphenamine and its derivatives of an unpleasant taste of garlic or an odour of ether. In some cases the discomfort amounts to pronounced nausea and precedes gastro-intestinal reaction. He has found that by allowing a wafer impregnated with oil of wintergreen or a clove to dissolve on the tongue during the injection of the drug complete relief from this symptom is obtained without unfavourable results. He suggests the use of such wafers as a routine, though he is uncertain whether the effect is due to the volatile essence or merely to the diversion of the attention of nervous patients.

Ophthalmology.

502. Cerebral Aneurysm causing Ocular Symptoms.

J. A. CONWAY (*Brit. Journ. Ophthalmol.*, February, 1926, p. 78) describes two cases of this condition; he points out that it is not so very uncommon and that it occurs quite frequently in youth. Cases of cerebral aneurysm can be divided into three groups: (1) Those in which death ensues suddenly from an apoplectiform seizure without any preceding symptoms. (2) Those presenting symptoms of cerebral disturbance, which are often very slight and equivocal but are followed by an apoplectiform seizure. (3) Cases in which the aneurysm was an accidental finding at a necropsy. The cases he describes were of the second group, and the ocular symptoms consisted in disturbances in the visual field. In one of the cases after great loss of field a considerable degree of recovery followed and was thought to be due to thrombosing of the aneurysm. The field losses were of the hemianopic type, though differing in the two eyes and varying from time to time. Conway adds that cerebral aneurysm is almost impossible to diagnose with certainty, and the occasional intermittent character of the symptoms is probably the most suggestive feature.

503. Retinal Haemorrhage Synchronous with Onset of Menstrual Period.

E. N. NEULEN (*Amer. Journ. Ophthalmol.*, February, 1926, p. 85) describes the case of a woman who had a central retinal haemorrhage which occurred at the onset of the menstrual period. A week previously her eyes had been examined for glasses and both fundi were found normal. The haemorrhage in the right eye eventually cleared up completely and vision was at the last examination 6/9. A few months after the occurrence of the retinal haemorrhage she suffered from an attack of scleritis in the left eye. Frequent attacks of scleritis occurred subsequently and an exacerbation in the scleritis was usually noticed at the menstrual period. Further examination revealed evidence of tuberculosis, and she was treated with tuberculin. The left eye slowly deteriorated during the period in which she was under observation and the cornea became nebulous. The right eye, however, remained unaffected and no further retinal haemorrhage occurred.

504. Exostosis of the Orbit.

A. KNAPP (*Arch. Ophthalmol.*, March, 1926, p. 128) describes a case of this condition in which he successfully removed the growth. It is important to distinguish between an encapsulated osteoma, which is a tumour occurring in an accessory nasal cavity and secondarily extending into the orbit, and an exostosis, which is a circumscribed new bone formation arising from the surface of the orbit. The osteoma tends to grow towards the brain, and may cause cerebral symptoms complicated by a sinusitis. An exostosis usually arises from the upper and inner orbital walls and extends outwards, displacing the eyeball. It grows slowly, and there is frequently a history of trauma; by reason of its growing outwards the prognosis for life is good. *X* rays afford the most definite method of diagnosis. Surgical operation is the only treatment. If the attachment is broad and hard it may be necessary to drill holes and saw the intervening parts, or to divide the normal bone around the attachment of the tumour.

505. Anomalous Duct of Lacrymal Gland.

W. P. LING (*Amer. Journ. Ophthalmol.*, January, 1926, p. 1) describes a case of anomalous duct of the lacrymal gland occurring in a Chinese boy. This boy was somewhat underdeveloped and showed some asymmetry of his face, the right side being smaller than the left. There were some pedunculated masses in front of the tragus of the right ear, and the lids of the right eye were separated at the outer canthus, the resulting intervening space being covered with skin. Immediately external to the malformed external canthus there was an oblique opening through which tears dropped. The vision of both eyes was fully normal and the conjunctiva and cornea of the right eye were unaffected in any way. This anomalous duct was excised under local anaesthesia, a complete cure of the condition resulting. Microscopically the duct was found to be lined by stratified squamous epithelium.

Obstetrics and Gynaecology.

506. Vesicular Mole and Chorion-epithelioma.

R. HUGUENIN (*Bull. Soc. d'Obstét. et de Gynécol.*, No. 2, 1926, p. 109) discusses the questions whether there is any criterion of the malignity of a mole and whether a mole can lead to a fatal chorion-epithelioma. He points out that histologically there are two distinct types—the common form and the mole which is filled with large islets without stroma and ill defined cells with large irregular multilobular nuclei, having mitotic figures; this type appears to be definitely malignant. L. DEVRAIGNE and R. A. SUZOR (ibid., p. 111) report two cases of patients, aged respectively 32 and 29, in whom the histological findings were regarded as definitely malignant. In the first case hysterectomy was refused by the patient, and under local expectant treatment the menorrhagia ceased and the uterus returned to its normal size. Subsequent menstruation was regular and the general health remained excellent. In the second case curetting was followed by apparent recovery; but hysterectomy was subsequently necessary for cancer of the body of the uterus. BRINDEAU (ibid., p. 113) thinks that the gravity of a mole has been greatly exaggerated. Many patients subsequently became pregnant. He adds that it is often very difficult to base prognosis on histological examination. Couvelaire has reported a case in which the histological appearance of an expelled mole, together with the uterine hypertrophy and menorrhagia, led to a diagnosis of chorion-epithelioma. Hysterectomy was performed, but the tumour did not extend beyond the mucosa and there was no ulceration or sign of any metastases. Though morphologically malignant, the mole was benign in its clinical development.

507. Chronic Gonorrhoea in Women.

F. MONTUORO (*Riv. d'Ostet. e Ginecol. Prat.*, February, 1926, p. 110) points out that the diagnosis of chronic gonorrhoea in the female is difficult, yet of great importance. The history is often fallacious: frequently an acute attack is experienced without being recognized by the patient, for the urethra may escape infection, so that dysuria is lacking. The first symptom to attract attention may be leucorrhoea, but excessive vaginal discharge may pass unnoticed in a person habituated to a daily douche. Nevertheless, in every gynaecological examination the presence of latent gonorrhoea should be borne in mind. It is important that micturition should not immediately precede the examination lest a purulent urethral discharge should escape observation. The important signs are: (1) the presence of such a discharge; (2) redness around the urethral opening, possibly accompanied by small condylomata; (3) purulent secretion from Skene's tubules and Bartholin's glands; (4) the presence of Sänger's macules near the

openings of Bartholin's ducts; (5) the association of some or all of these signs with the presence of adnexal inflammation. Microscopical detection of gonococci will clinch the diagnosis, but their absence in smears is far from conclusive. Montuoro points out that minor operative interventions in the genital organs of patients suffering from chronic gonorrhoea which has not been recognized are very apt to be followed by acute and serious pelvic inflammatory conditions which may entail prolonged illness and necessitate very careful treatment.

503. Chorea Gravidarum.

K. V. LEHOCZKY-SEMMELWEIS (*Zentralbl. f. Gynäk.*, March 6th, 1926, p. 608) states that the prognosis of chorea in pregnancy is considerably worse than that of chorea minor, the mortality being from 17 to 25 per cent. Its origin has been described to a pregnancy toxaemia, to reflex nervous influences, and, owing to its not infrequent association with polyarthritis and endocarditis, to infection. This last view is supported by the necropsy findings reported by Schuster—namely, recent endocarditis with thrombi and haemorrhages in the central and frontal gyrus. In this case *Staphylococcus pyogenes aureus* had been found in the blood before death. A case recorded by the author is taken as supporting the infective rather than the toxic origin of chorea of pregnancy. The patient, a 2-para aged 23, suffered in the seventh month of pregnancy from severe chorea in association with fever and polyarthritis; she died two days after induction of labour, and the necropsy showed well marked perivascular infiltration (chiefly with lymphocytes and plasma cells) in the corpus striatum, optic thalamus, and substantia nigra, as well as degenerative changes in the putamen and globus pallidus, with considerable proliferation there of the neuroglia.

503. Treatment of Carcinoma of Cervix.

H. H. BOWING (*Amer. Journ. Obstet. and Gynecol.*, March, 1926, p. 400) states that the combination of surgery, radium, and x rays in the treatment of carcinoma of the cervix is usually very effective provided that the disease is recognized sufficiently early, since at least six or eight weeks are required for the tissues to respond effectively to treatment by radium. The response to treatment is subject to individual variations, and the correct dosage can therefore only be established by experiments. He thinks that radium should be applied by the broken or fractional method rather than by the use of the destructive single dose, since the former enables the treatment to be modified according to the patient's response. With the patient in the knee-chest position and the employment of a Sims speculum and direct illumination, a silver tube applicator, containing 50 mg. of radium element, is inserted into the substance of the tumour, or into the cervical and uterine canal, and allowed to remain in position for from fourteen to twenty hours. The treatments are given about twice a week for from three to six weeks, the aim being to employ about a total of 3,000 mg. hours of radium for each 2.5 cm. depth of involved tissue. These radium treatments may be supplemented by x-ray treatments, using high voltage, with copper and aluminium filtration over the anterior, posterior, and lateral areas, one area being exposed each day until all have been treated. Bowing classifies cases into five groups, according to the location and extent of the disease. In the first group are cases with early or operable lesions in the cervix, and in the second group border-line cases with the disease limited to its vaginal surface. The third group contains the inoperable cases with the disease involving the vaginal walls, broad ligaments, and lymphatic glands, with some degree of fixation, and the fourth group includes recurrences. The fifth group is made up of cases in which previous treatment was incomplete, the disease being modified but not eradicated. The therapeutic procedures adopted vary in the different groups.

510. Basal Metabolism during Pregnancy.

GARIPUY, LASSALLE, and SENDRAIL (*Gynécol. et Obstét.*, 1926, xiii, 3, p. 172) remark that the augmentation of basal metabolism which is well known to occur during pregnancy, attaining a maximum of about 35 per cent. towards the thirty-eighth week, has been frequently explained as due to increased activity of the thyroid gland. That it is in reality due to influences from the foetus is suggested, however, by its notable augmentation in multiple pregnancy and by its return to normal after death of the foetus in the uterus. The latter view is supported by their observations on fifteen pregnant patients showing no clinical signs of increased thyroid activity. In these the oculo-cardiac reflex was almost invariably of normal type. Little or no acceleration of the pulse occurred after intramuscular injection of 1 mg. of adrenaline, and slowing of the pulse after the intramuscular injection of 1 c.cm. of pituitary extract was exceptional.

Pathology.

511. Bacteriology of the Common Cold.

G. S. SHIBLEY, F. M. HANGER, A. R. DOCHEZ, and KATHERINE C. MILLS (*Journ. Exper. Med.*, March, 1926, p. 415) have studied the flora of the nose and throat of thirteen patients over periods of five to nine months, noting changes in the numbers and nature of the bacteria in health and during catarrhal and throat infections. They found that in healthy nostrils *Staphylococcus albus* and diphtheroids were almost invariably present in some patients, while in others *Staphylococcus albus* and *citreus* were the characteristic organisms. From time to time Gram-negative cocci and non-haemolytic streptococci made their appearance. In the throat Gram-negative cocci and non-haemolytic streptococci were regularly present, and in some cases large Gram-positive cocci, *B. influenzae*, and diphtheroids. Transient organisms were *Staphylococcus citreus*, *aureus*, and *albus*, pneumococci, and haemolytic streptococci. In the early stages of nasal catarrh no bacteria were found which seemed to be definitely causative; during colds the bacterial content of the nose was often reduced in the early stages, and the throat also showed reduction of numbers or change in predominance of the normal flora. Certain organisms prominent in colds but usually appearing late were *Staphylococcus aureus*, haemolytic streptococci, and *B. influenzae*; pneumococcal infections were not found in any case. Inflamed throats showed a striking incidence of streptococci of the haemolytic type, which replaced the Gram-negative cocci present in health.

512. Filterable Forms of B. typhosus in the Stools of Convalescents.

P. HAUDUROY has stated that he had found organisms closely resembling *B. typhosus* existing in water in the form of invisible filterable bodies, which, on frequent subculture, developed into the usual bacillary forms (*Epitome*, March 27th, 1926, para. 355). Arguing from this that it must have gained access to the water from the faeces of patients suffering from typhoid fever, he now reports (*C. R. Soc. de Biologie*, March 19th, 1926, p. 661) the result of examining the stools of convalescent patients after typhoid fever. A small portion of faeces was incubated in ordinary broth for twenty-four hours, filtered through a Chamberland L3 candle, and the filtrate itself incubated. At the end of two or three days as a rule the filtrate became opalescent, or sometimes showed the presence of granules. Subculture into liquid media was successful, but on solid media growth did not occur for some time. After several subcultures the colonies on solid media became more and more normal, and the organisms of which they were composed passed from a granular to a typical bacillary form. The stools of three convalescent patients from typhoid were examined in this way. From one an enterococcus was obtained, from another a Gram-negative vibrio, and from the third a bacillus that was culturally indistinguishable from *B. typhosus*, though it failed to agglutinate with specific serum. From these observations the author concludes that filter-passing forms of typhoid bacilli may be found in the stools of patients and convalescents, and that these may gain access to water, by which they may be conveyed anew to man. It is possible, therefore, that they are concerned in the etiology and the epidemiology of typhoid fever.

513. A Test for Metabolic Variations.

R. PORAK (*Rev. de Méd.*, 1925, No. 8, p. 753) has devised a simple test to indicate changes in metabolism. The patient lives as he likes and is submitted to no restraints, but he is told to enter in a notebook everything that he does during the day. He micturates when he feels the need, and records the times of successive micturitions together with the amounts of urine. With these data a curve is constructed from which the amount of urine excreted a minute can be calculated. The method is designed to give the same information as that obtained by ureteral catheterization. Having worked out the normal curve for the patient, the author then studied the effect of alterations in diet, in drink, in exercise, in exhaustion, and in other factors on the curve. In this way he was able to form an opinion on the extent to which the liver in particular was performing its work. He found that nervous exhaustion lowered the quantity of urine secreted very considerably. The effect of walking was first to increase the rate of excretion, and then to lower it. After a period of rest excretion rose again, but if the walk was such as to cause exhaustion the excretion remained low for some time, and did not regain its normal amount till after a thorough rest. If a large quantity of beer was drunk during the course of a heavy dinner the post-prandial diuresis was lowered; this the author considers to be due to retention of water in the liver. Sleep came only with difficulty, and diuresis did not set in till the early morning hours.

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

514. Fatal Asthma.

F. M. RACKEMANN (*Boston Med. and Surg. Journ.*, March 25th, 1926, p. 531) reports a fatal case of true spasmodic asthma with the necropsy findings. The patient was a woman, aged 43, otherwise apparently in good general health; there was a previous history of attacks of hay fever between the ages of 14 and 31. Positive skin reactions were obtained to timothy grass and ragweed. After the hay fever ceased she began to have attacks of asthma, at first with long intervals between them; they subsequently increased in frequency and in severity. Death occurred during a paroxysm. Although the cutaneous tests were positive, no extrinsic cause of the asthma was determined, and seasonal variations or changes in environment did not affect the course of the malady. Clinical evidence suggested no cause of death other than asthma, and at the necropsy only acute dilatation of the right ventricle was found, with emphysematous changes in the lungs. The author refers to six deaths in asthma patients reported by Huber and Koessler, and to another fatal issue described by Lemierre. Rackemann has seen five other fatal cases of asthma, but necropsies were not performed. He adds that a bad prognosis must be given in the case of severe asthmatic attacks commencing in well nourished women more than 30 years of age if the evidence of specific sensitiveness to foreign substances is small and the condition does not respond to general treatment.

515. Acute Aseptic Meningitis.

A. WALLGREN (*Wien. Arch. f. inn. Med.*, February 10th, 1926, p. 297) states that in the large group of diseases constituting acute meningitis a syndrome may be isolated characterized by an acute onset, definite meningeal symptoms, a sterile cerebro-spinal fluid usually showing lymphocytosis, short duration, and favourable course without any sequelae. Its occurrence is sporadic as a rule, but the presence of several cases in one place makes it probable that it is an infectious disease. As far as is known, the first epidemic of the kind occurred in France in 1910–13, and the next appearance of the disease was in Scandinavia in 1922–24. Sporadic cases have occurred in most European countries, but no examples have yet been reported from England, Germany, or the east of Europe. It appears certain that the disease of 1910–13 was identical with that of 1922–24, and as it is neither clinically nor epidemiologically possible to identify it with any known infectious disease it is most probable that these cases of meningitis were examples of a hitherto unobserved disease of the central nervous system. Whether this view is correct or otherwise will be determined by subsequent outbreaks of the disease, and the experiments on animals now in progress will contribute to the solution of the problem.

516. Carbon Monoxide Poisoning.

D. C. WALTON, W. A. ELDRIDGE, M. S. ALLEN, and M. G. WITHERSPOON (*Arch. Intern. Med.*, March 15th, 1926, p. 398) have endeavoured to determine the relative value of the present methods of treatment of carbon monoxide poisoning. From dogs treated with pure carbon monoxide samples of blood were taken at intervals of ten minutes and the percentage of haemoglobin saturated with carbon monoxide estimated. Controls were allowed to breathe ordinary air and the others were treated through a face mask connected with rubber balloons attached to large cylinders containing the different remedial mixtures to be tested. The rate of elimination under treatment was noted for (1) oxygen only; (2) oxygen and 5 per cent. carbon dioxide; (3) oxygen and 10 per cent. carbon dioxide; (4) air and 5 per cent. carbon dioxide; and (5) air and 10 per cent. carbon dioxide. Since the period of danger in carbon monoxide asphyxia is reached when the saturation of the blood is over 30 per cent., it is necessary that the treatment used shall be capable of reducing such saturation to 25 per cent. with the greatest safety and rapidity. It was found that the rapidity of reduction by the above methods occurred in the following order: oxygen and 10 per cent. carbon dioxide; oxygen and 5 per cent. carbon dioxide; oxygen alone; air and 10 per cent. carbon dioxide; and air and 5 per cent. carbon dioxide. The first and fourth mixtures are dangerous for practical use owing to the possible overtaxing of a weakened heart by the violent respiratory efforts induced, and while there is but little difference between treatment by oxygen alone or combined with 5 per cent. carbon dioxide these are much superior to treatment by air with 5 per cent. carbon dioxide. Since oxygen treatment is more readily available its use is advised especially where transportation is difficult, though for rescue in inaccessible mines, or in military operations, treatment by air and 5 per cent. carbon dioxide should be of value.

517. Hilum Tuberculosis.

D. ZACKS (*Journ. Amer. Med. Assoc.*, February 27th, 1926, p. 598) discusses the relative value of symptoms, physical signs, and *x*-ray findings in the diagnosis of bronchial gland tuberculosis based on a study of 2,285 school children, of whom 1,176 gave a positive Pirquet reaction, 1,109 being negative. Underweight for age and height was found to be the most important symptom, others being a tendency to tire easily, nervous irritability, frequent "colds," sweating, night terrors, cough, and hoarseness. In 70 per cent. of the suspected cases interscapular dulness and a feeling of resistance were present, elicited best by light percussion over comparable areas. *X* rays usually showed a moderately thickened hilum with shadows within this thickened area which are interpreted as being bronchial or mediastinal glands. Linear markings or beading running from the hilum into the deep parenchyma and circumscribed discrete areas of density in the lung parenchyma, interpreted as calcified or fibroid tubercle, are said to be of special significance. Zacks believes that diagnosis of hilum tuberculosis rests upon a conservative evaluation of symptoms and physical signs controlled by *x*-ray examination and the tuberculin test. He holds that in the presence of a positive reaction appropriate dietetic and hygienic treatment should be instituted so as to prevent the development of tuberculosis in later life. The highest percentage of reactions to the Pirquet test occurs in patients who are under weight, being 29.2 per cent. as compared with 14 per cent. when the test was applied to the whole school population of a small town. Of other signs, râles were found twice as often in the non-reactor as in the reactor group, and the same applied to cardiac murmurs.

Surgery.

518. Total Gastrectomy.

E. SCHWARZ (*Zentralbl. f. Chir.*, March 6th, 1925, p. 578) records two cases in which this operation was performed in the Rostock University surgical clinic in 1925. (1) A woman, aged 44, had carcinomatous infiltration of the stomach, with a secondary growth in the gastro-splenic omentum. Total gastrectomy and splenectomy was performed in March. The pyloric end of the duodenum was closed and the lower end of the oesophagus fixed laterally in the jejunum by means of a triple row of sutures behind the colon. The patient's temperature fluctuated for some time and a left subphrenic abscess formed. The patient lost weight and left hospital three months after the operation. In September she was very emaciated and many intra-abdominal metastases were found. (2) A man, aged 51, had multiple carcinomatous growths in the stomach and one near the cardiac end could be palpated; there was no evidence of metastasis. Total gastrectomy was performed with closure of the pyloric end of the duodenum, and retrocolic junction of the lower end of the oesophagus with the jejunum by end-to-side anastomosis. Three rows of sutures were inserted. There was an initial loss of weight of 20 lb., but subsequently this was regained and the patient was discharged two months later. Three months subsequently his condition was still satisfactory. Schwarz estimates that in those patients who survive the operation there is a retardation of digestion of approximately 40 per cent. He has found 55 recorded cases of total gastrectomy; the immediate mortality in these was 50 per cent., but he thinks this estimate too low; it was probably nearer 70 to 80 per cent. He points out that Wrede and Ribera had a patient who lived for four years, and Moynihan's patient lived for three and a half years after the operation; a larger number were alive one year or more after total gastrectomy. Schwarz agrees that his own case is too recent for a definite conclusion, but he considers that since these patients are suffering from an inevitably fatal and frequently painful disease total gastrectomy is justifiable in suitable cases.

519. Colonic Polyposis.

R. C. COFFEY (*Annals of Surgery*, March, 1926, p. 364) states that in no benign process is there a higher incidence of malignancy than in colonic polyposis, which results from

an antecedent inflammatory or ulcerative condition of the mucous membrane of the colon. Treatment is necessary for the haemorrhage, diarrhoea, and because of the danger of malignancy. It may be conservative, consisting in caecostomy, irrigations, or radium, or radical, which involves excision of the polyp-bearing area. A case is recorded in which excision of the colon and rectum was performed. Coffey states that in this operation it may be advisable to perform the ileostomy first as a preliminary operation and the colectomy at a later date. He finds ileostomy a satisfactory procedure and more comfortable to the patient than a colostomy. The colon is not essential to the perpetuation of life, and in the case recorded satisfactory recovery ensued.

520. Prostatectomy.

G. CATTANEO (*Arch. Ital. di Urol.*, March, 1926, p. 293) records his observations on a hundred cases of Freyer's prostatectomy. The ages of the patients ranged from 47 to 80, the great majority being between 61 and 70. Only one case ended fatally. The clinical forms were as follows: complete retention, acute or chronic, septic or aseptic, 34 cases; chronic incomplete retention, septic or aseptic, 60 cases; incomplete septic retention with distension and ischuria paradoxa, 6 cases. In only 18 cases was the urine aseptic. In all the others the bladder was infected and several had haemorrhage due to dirty catheters, large adenomata, calculi, papillomata, or vesical diverticula. The weight of the prostates removed ranged from 5 to 60 grams and over. Cattaneo's conclusions are as follows: (1) Retention of urine is the chief indication for prostatectomy; if it is aseptic waiting is justifiable, especially if the patient can be examined periodically to determine if the retention tends to increase. (2) Septic retention, even though not severe, is an indication for operation, because no palliative treatment can cure vesical sepsis when once it is established. (3) The formal indications for prostatectomy are repeated haematuria, suspected cancerous degeneration, primary or secondary calculus formation, papillomatous growths, and diverticula of the bladder. (4) Prostatectomy should not be regarded as an emergency operation like epicystotomy, which may be performed in rare instances for checking prostatic haemorrhage. (5) The study of renal function, examination of the urine, determination of Ambard's constant, and the phenosulphonephthalein test supply important data for judging of the patient's improvement, but the estimation of the physical resistance of the individual patient from a study of the general and local conditions in each case is of greater value still. (6) Prostatectomy in most cases should be performed in two stages. The operation in one stage should be reserved for small prostates, deformity of the neck of the bladder, and lesions of the musculo-fibrous part of the prostate rather than of the adenomatous elements. (7) Injection of calcium chloride is useful for checking post-operative haemorrhage, and in about half the cases renders plugging the prostate unnecessary. (8) Anaesthesia should be local in the case of epicystotomy and epidural in prostatectomy; complete avoidance of general anaesthesia has considerably improved the statistics of operation.

521. Spontaneous Rupture of the Oesophagus.

T. H. WILLIAMS and W. BOYD (*Surg., Gynecol. and Obstet.*, January, 1926, p. 57), who report a personal case, illustrate the rarity of this condition by the fact that only thirty-three examples have been recorded since Boerhaave reported the first case in Admiral Baron Wassenaar in 1724. Fitz states that with the exception of two cases reported by Meyer and Allan and by Grammatzki no cases have been definitely established of death having been caused by this condition. It is generally agreed that death seldom occurs apart from the condition known as oesophago-malacia, sometimes known as alcoholic oesophagitis. The present authors' patient was an alcohol addict who about six or eight years previously began to have gastric trouble. Death occurred a little less than twenty hours after the onset of an attack, which started with vomiting and intense pain in the upper part of the abdomen just below the lower end of the sternum. The necropsy, twenty-four hours after death, showed a perforation 1 inch in diameter about an inch above the diaphragm in the left side of the oesophagus leading directly into the pleural cavity, which was filled in with a dark reddish-brown fluid containing numerous particles of meat and other solid food. Histological examination of the lesion showed such extensive destruction and disintegration of the oesophageal wall that it was impossible to be certain which was the inner and which the outer coat. Experiments conducted by the authors on dogs indicated that when perforation of the oesophagus was produced in a healthy animal by a Maisonneuve urethrotome these changes did not occur. The authors conclude that spontaneous rupture of the oesophagus is preceded by some inflammatory process which weakens the oesophageal wall, and suggest that when the diagnosis of spontaneous rupture of the oesophagus is made pleural puncture and aspiration of the exudate should be performed and followed by drainage of the infected cavity.

Therapeutics.

522. The Use of Diuretics.

P.-E. MORHART (*La Vie Méd.*, February 12th, 1926, p. 239) states that the relative proportion of water, crystalloids, and colloids in the system is regulated not only by the kidneys, skin, and lungs, but also by the central nervous system, the endocrine system, the liver, and the tissues generally. Rest in bed promotes diuresis by hastening the excretion of water. Carbohydrates increase the retention of water, while fats diminish thirst. If no salt is added to the food the body loses 15 to 25 grams of sodium chloride and 1½ to 2½ kilograms of water; a saltless dietary is therefore itself diuretic. Generally speaking, the intake of water and salt increases the quantity of water taken up by the tissues, and consequently may cause oedema. Potassium, calcium, magnesium, and strontium have a diuretic action when combined with phosphoric or sulphuric acid, though their chlorides have the reverse. The tissue reaction is similarly concerned, acidosis producing diuresis while alkalosis inhibits it. The diuretic action of theobromine is aided by simultaneous administration of stable acids and inhibited by alkalis. Large doses of the chlorides of calcium and ammonium are diuretic because they acidify the plasma, and conversely the unstable citric and malic acids have a considerable alkalinizing power. Potassium salts, especially the acetate, bitartrate, and bicarbonate, have long been employed as diuretics. Among the endocrine glands, the thyroid has a powerful diuretic action, not only in myxoedema, but also in various types of oedema. Diminished activity of the posterior lobe of the pituitary produces excessive diuresis (diabetes insipidus), while increased activity causes retention of water. The ovaries have a similar action, and during menstruation there is usually retention of water in the system. The liver is a potent factor in diuresis, its pneumogastric nerve branches inhibiting the excretion of water in the same way as follows the injection of histamine, peptone, and hypophyseal extracts, while stimulation of its sympathetic supply has a diuretic action, similar to that of caffeine, diuretin, and hypertonic solutions. It is very probable that the diuretic action of mercury depends upon its stimulating action on the liver. The nervous centres—cortical, mesencephalic, and medullary—also play a part in diuresis. Morhart states that the part played by the kidney is now considered generally to be subordinate to that of the tissues, although most diuretics have a definite action on the kidney. The effects of calomel are usually immediate, while those of thyroid extract are delayed. The author recommends massive doses, although he states that mercury is contraindicated in cachexia and in inflammatory conditions of the alimentary canal and of the kidneys. Purin bodies, theobromine, diuretin, and also urea, are powerfully diuretic. A high blood urea concentration does not contraindicate the administration of urea, nor are renal lesions likely to be aggravated by it as by mercury. Urea gives as good results in pleuritic effusions and tuberculous peritonitis as in portal ascites, but it may produce nausea, dyspepsia, and diarrhoea, unless given in marmalade or coffee. The author recommends that diuretic treatment should include days of abstention from food; on certain days fluids should be withheld, and on other days sugar be given.

523. Intravenous Administration of Emetine.

V. N. DEUSKAR (*Indian Med. Gazette*, April, 1926, p. 165) reports the results of treating seventy cases of amoebiasis with intravenous injections of emetine in 1-grain doses, for nine consecutive days, followed by an interval of about six days, during which only a morning saline aperient was given; the emetine course was then repeated. In some cases intensive bismuth medication was combined with the emetine. The case mortality was about 12.5 per cent., and the series included patients with as low a weight as 5 st. 13 lb. and as low a haemoglobin percentage as 40. Tolerance was fairly satisfactory, and no toxic symptoms occurred. The author states that if rest in bed could be rigidly enforced during treatment, this method could be safely extended to patients in private practice. He adds, as the result of necropsy findings, and in view of the fact that relapses occur in some cases, that it appears that the treatment of chronic cases by this method is no more effective than when emetine is given by other routes.

524. The Treatment of Infantile Bronchopneumonia.

L. RIBADEAU-DUMAS and J. CATHALA (*Paris Méd.*, February 20th, 1926, p. 170) consider that the principal group of bronchopneumonias in infants is of the anoxaemic type, and treatment should be directed to the anoxaemia with its attendant dyspnoea and cyanosis. They recommend as stimulants the hypodermic injection of 1/10 mg. of strychnine sulphate in 1/10 c.cm. of sterilized oil, to which may be added 1 cg. of sparteine sulphate twice a day; deep injections of 1 c.cm. of ether two, three, or four times a day are also advocated, and digitalis as a cardiac tonic. Counterirritants, such as hot baths every three or four hours, fomentations, or mustard poultices are of value. In the event of hyperpyrexia tepid baths of 95° are indicated. Wet cupping is recommended to relieve pulmonary congestion, especially when the temperature is 103° or 104° F. in infants of 18 months or over who are not debilitated. Intensive oxygenation is obtained by oxygen inhalation, in a special room or otherwise, the percentage of oxygen in such a chamber being raised from the atmospheric 21 per cent. first to 40 and then to 60 per cent. The subcutaneous injection of 150 to 300 c.cm. of pure filtered oxygen has also been found useful, and intraperitoneal injection in which the absorption of oxygen is more rapid. In another group of cases, marked by a toxic syndrome with profound asthenia, stimulants such as strychnine or ether are indicated, and the need for rehydration of the body is urgent. Transfusion from a suitable donor is said to be the best method, but failing this the repeated subcutaneous injection of 10 c.cm. of blood is recommended. Other measures include the hypodermic or intraperitoneal injection of isotonic artificial serum, glucose, Ringer's solution, or antipneumococcic serum. Weil and Dufourt have reported encouraging results from the use of a polyvalent vaccine consisting of pneumococci of types I, II, and III, and of various strains of enterococci, with *M. tetragenes* and staphylococci. The present authors inject large doses of antipneumococcic serum—40 to 80 c.cm. a day over several days—but they regard it rather as a rehydrating than as a specific agent. They add that ethylhydrocuprein (optochine) has been proved experimentally to have a remarkable selective action on the pneumococcus, but against its clinical application is its toxicity, amblyopia and amaurosis having followed its use. At present, therefore, its value is limited to those cases in which a weak solution can be brought into direct contact with the infecting organism—as, for example, in purulent pleurisy, pneumococcal conjunctivitis, and perhaps meningitis.

525. Treatment of Amoebic Dysentery.

P. MÜHLENS (*Arch. f. Schiffs- u. Tropen-Hyg.*, Bd. 29, 1925, p. 491) states that hitherto emetine, like quinine in malaria, has been regarded as the only specific for amoebic dysentery. He was at first inclined to regard yatren (a preparation of iodo-oxy-quinoline-sulphonic acid) merely as an adjuvant, but he now considers it to be the best remedy at the present time for chronic amoebic dysentery. He thinks, moreover, that in acute amoebic dysentery yatren is at least as effective as emetine, and finds that most cases of bacillary dysentery react promptly to it. In acute cases, of both amoebic and bacillary dysentery, the drug should be given only by mouth in doses of 0.5 or 0.8 gram four to six times a day, commencing with 0.05 or 0.1 gram. In chronic cases internal treatment is usually sufficient without employing emetine. Rectal injection is chiefly required in chronic cases in which ulcers can be found on rectal examination. A combination of internal treatment and rectal injections in doses of 1 to 2 grains by the mouth and 3 to 5 grams by the rectum is particularly efficient in old-standing amoebic dysentery. Many observers have found that a single course of treatment extending over six to ten successive days is sufficient. Most writers, however, recommend two to five subsequent courses lasting from three to six days after a week's interval between each. A strict diet is not necessary during the treatment. Another advantage of yatren is that the simplicity of its application renders it suitable for out-patient practice.

Laryngology and Otology.

526. Peroral Endoscopy.

L. H. CLERF (*Arch. of Otolaryngol.*, March, 1926, p. 265) comments on the recent great advances in peroral endoscopy. Bronchoscopy has been found to be of great value in the treatment of lung abscess following operation. Chevalier Jackson thinks that its efficiency is due to good drainage through the mouth by bronchoscopic aspiration rather than to medication. Bronchoscopy has also been found by Lukens and Moore to be of value in the treatment of asthma with pathological changes of the trachea and bronchi. Removal of the secretion results in improved ciliary action, which is necessary for permanent improvement. Bronchoscopic instillation of lipiodol for the *x*-ray examination of the lung is considered to be the best method of introduction. Of great importance are the observations by Jackson and Lee of treatment of post-operative massive collapse of the lung. In one case thick tenacious mucus was found in the right main bronchus and the middle lobe bronchus with complete plugging of the lower lobe bronchus. The material was removed with a bronchoscopic aspiration tube and the patient made a rapid and uneventful recovery. Early diagnosis of malignant disease of the lung is necessary if there is to be any chance of cure by lobectomy, and bronchoscopy supplies the only means of diagnosis in the early stages. It enables the endoscopist to observe the typical appearance of the infiltrative type of new growth, or in an endobronchial growth tissue can be removed by bronchoscopy for pathological examination. Oesophagoscopy, the one exact diagnostic method in disease of the oesophagus, should be used in all doubtful cases; it enables the source of blood in haematemesis to be localized and facilitates early diagnosis of malignant disease. Operative treatment can be undertaken with some chance of success if the disease is discovered in time. Chevalier Jackson (JOURNAL, October 17th, 1925, pp. 686 and 699) has drawn attention to the value of bronchoscopy in connexion with the possible presence of foreign bodies in the air and food passages. They frequently give rise to symptoms simulating such common diseases as pneumonia, bronchitis, bronchopneumonia, empyema, abscess, bronchiectasis, tuberculosis, and asthma; *x* rays should always be combined with careful and repeated physical examination. A loud asthmatoid wheeze is frequently present, and of great diagnostic importance in certain tracheo-bronchial foreign bodies. For the diagnosis of non-opaque foreign bodies in the trachea an elaborate *x*-ray technique has been devised by Manges.

527. Hearing after the Radical Mastoid Operation.

J. A. KEEN (*Journ. of Laryngol. and Otol.*, March, 1926, p. 145) has studied 60 cases of radical mastoid operation. Hearing tests were made as soon as the ear was dry after operation and again after an interval of twelve months to ascertain whether, after successful operation, the hearing remained the same. Only those cases were tested in which the cavity was completely healed and dry at the time of the first test and remained so for twelve months afterwards. The author concludes that the degree of hearing which remains is quite independent of the duration of otorrhoea prior to the operation, provided that the bone conduction remains good. Hearing tests before operation afford no indication of the extent of post-operative hearing. With the possible exception of cholesteatoma the state of the ear at the time of operation has no bearing on the final hearing capacity. The best type of operation cavity from the point of view of hearing is a large, or moderately large, cavity lined with epithelium. Of the 60 patients of the author's series one-third heard better after a year and two-thirds heard worse; improvement probably depends upon use. In the most striking case of improvement the deaf ear had been systematically used in preference to the sound ear. The bone conduction tests varied very little, while the voice and watch tests varied within wide limits. Keen thinks that the sound of a tuning-fork placed on the mastoid reaches the cochlea by true molecular transmission through bone and that the osteo-tympanic explanation of bone conduction is not satisfactory. He adds that Helmholtz's classical explanation of sound conduction does not appear to be entirely satisfactory as it does not take into account the possibility of hearing in the absence of drum and ossicles. But it has been proved that sound vibrations reach the cochlea by other ways and in exceptional cases these unusual channels are so developed that hearing is excellent.

528. Rhino-scleroma of the Pharynx.

ARGUARD and LAVAL (*Arch. Internat. de Laryngol., Otol. et Rhinol.*, December, 1925, p. 1164) describe a case of rhinoscleroma occurring in the pharynx. In the cases previously reported most of the patients had lived out of Europe and particularly in Central and South America, but the cases in Austria, Hungary, Poland, and Russia may almost be classed as endemic. A man, aged 68, had, forty years ago, spent four years in the Philippine Islands. In 1923 he complained of discomfort in the throat, especially on eating or speaking, and even during quiet respiration. He had a hypertrophic and deeply ulcerated condition of the right tonsil which very closely resembled Vincent's angina; the ulceration spread on to the base of the tongue. The condition improved under local treatment. Seven months later there was a distinct relapse. The tonsil, back of the tongue, and the lingual tonsil were very swollen. The lingual tonsil and the right palatine

tonsil were removed and the fragments showed a practically normal epithelium with an abundant submucosa, beneath which was a large mass of cells. In some cases the deeper epithelial cells and the underlying mass were intermingled, and it was very difficult to say where the epithelium ceased. The main mass of cells are described as plasma cells, and among them were found certain distinctive cells. One type of these special cells (cells of Russell) appears to consist of a globule of "hyaline," probably due to degeneration of the plasma cells. A second type (cells of Mikulicz) consists of cells in which the degeneration has produced a bilocular or trilocular cell with the loculi filled with "hyaline" and the nucleus centrally placed between the loculi. These cells are epithelial cells in contrast with those of Russell. Diagnosis depends on the recognition of these special cells.

Obstetrics and Gynaecology.

529. Pseudo-neoplastic Tuberculosis of the Body of the Uterus.

ACCORDING to A. A. BABÈS (*La Gynécol.*, January, 1926, p. 4), tuberculous disease affects the body of the uterus not only in a miliary form, and an ulcero-caseous form having its primary site in the mucous membrane, but also in a hypertrophic or pseudo-neoplastic form. The last named, although well known in the cervix, has been much more rarely reported as occurring in the body of the uterus. In a case described by Babès a 6-para aged 50, who complained three years after the menopause of abdominal pain and copious fetid vaginal discharge which was sometimes haemorrhagic, was suspected to have cancer of the body of the uterus: a biopsy led, however, to the diagnosis of interstitial metritis of the body of the uterus with considerable glandular but no atypical proliferation in the endometrium. After operation the uterine enlargement was found to be due to a tumour, the size of an apple, in the posterior wall of the uterus, causing a projection within the cavity, over which the endometrium was thickened and irregular and showed numerous small vegetations. On section the myometrium was found to contain several small cavities filled with pus, and numerous caseous masses were also present; the endometrium was almost entirely replaced by well preserved tuberculous granulation tissue. In other recorded cases hyperplastic tuberculous disease of the corpus uteri has caused subperitoneal tumours simulating myomata. Babès is satisfied that the condition described originates in the myometrium.

530. Pituitary Extract in Induction of Labour.

H. HOELAND (*Zentralbl. f. Gynäk.*, March 13th, 1926, p. 662) states that in 65 per cent. of cases Stein was successful in inducing labour, which terminated usually within eighteen hours, by administering in the morning a tablespoonful of castor oil and injecting intramuscularly at hourly intervals two drops of pituitrin. Eversmann, using a similar method, has been able to reduce the average duration of labour by over 50 per cent. Calmann also has had good results, but in addition administers ether in order to diminish the painfulness of the strong uterine contractions. In about 60 per cent. of cases Hoeland has succeeded in materially shortening the second stage of labour by intramuscular injection of two drops of pituitrin at hourly intervals; English preparations are said to be more effective than German ones. In a few cases he has been able to induce labour at term by injections of pituitary extract, combined if necessary with those of quinine.

531. Elephantiasis Vulvae.

J. A. VAN DONGEN (*Nederl. Tijdschr. v. Geneesk.*, March 27th, 1926, p. 1293), who records an illustrative case in a Dutch girl, aged 13, states that elephantiasis vulvae, which is frequent in tropical countries, is extremely rare in Europe. It is an affection which occupies an intermediate position between an infection and a new growth. In some cases the surface is smooth (elephantiasis glabra), and in others, as in van Dongen's patient, it is irregular and nodular (elephantiasis tuberosa). In some the growth is of firm consistence, and in others, as in van Dongen's case, soft. The surface may be affected by suppuration, rhagades, or fissures discharging lymph, or show vesicles filled with lymph, as in the present case. The growth may reach a considerable size. On histological examination oedema of the subcutaneous tissue is usually found as well as dilated lymphatics, with or without lymphangitis or perilymphangitis. Evidence of infection may be found in the subcutaneous tissue in the form of infiltration of leucocytes. The epidermis may be thickened or thinned or even absent altogether. Giant cells and plasma cells may be present. Elephantiasis vulvae is almost confined to adults, so that van Dongen's case is a remarkable exception. Traina and Marconi have also reported an example in a child. The cause of the condition is not always the same. Sometimes elephantiasis vulvae is due to a disturbance of the circulation of blood or lymph caused by scars, thrombosis, or enlargement of the inguinal lymphatic glands. In the tropics the condition is due to obstruction of the lymphatics by *Filaria bancrofti*. Some writers, such as Tchlenov and Veit, attribute the elephantiasis to syphilis, whereas Forgue and Massabuan incriminate tuberculosis. In van Dongen's case both these causes could be excluded. The lesion was probably caused by friction of the clothing giving rise to an epithelial defect which served as a portal of entry for infection. Complete recovery followed amputation of the labia.

Pathology.

532. Interaction of Tuberculosis and Cancer.

E. CENTANNI and F. REZZESI (*Rif. Med.*, March 1st, 1926, p. 195) have performed a series of experiments on mice with a view to determining the relation between tuberculosis and cancer; the cancerous material was taken from adenocarcinomata. On the whole it appeared that the two diseases were antagonistic, and that if one was well established the other failed to develop. If a mixture of the tumour and living bacilli was used for an injection the tumour cells were injured and the implanted cells failed to develop. When living bacilli and the cell emulsion were given simultaneously, but in different parts of the body (skin and peritoneum), the tumour usually failed to develop so long as the tuberculous process was active, but sometimes started when the effect of the tuberculous injections had passed off. Living bacilli injected into the substance of a tumour already established caused some necrosis, but did not prevent the death of the animal from relapse or absorption of disintegrated products. Experiments with the injection of dead bacilli showed that they did not cause any appreciable change in the tumour. This fact suggests that the influence of the living bacilli may be due to the state of allergy which active tuberculosis excites.

533. Cholesterol Content of the Cerebro-spinal Fluid in Mental Diseases.

E. G. T. POYNDER and J. RUSSELL (*Journ. Ment. Sci.*, January, 1926, p. 62) publish the results of experiments to find out whether the amount of cholesterol found in certain mental diseases bears any relation to the destruction of brain tissue, or to changes, probably of an inflammatory nature, in the meninges. The Wassermann test and Pandy's test for proteins were performed on all the cerebro-spinal fluids, any fluids which were found to contain blood corpuscles after centrifugalization being eliminated. Using alcohol as a protein precipitant, they found that only traces of cholesterol were demonstrable in the albumin-free filtrate in cases of general paralysis showing a positive Wassermann reaction. But on extracting the protein precipitate with chloroform cholesterol was found in measurable quantities in thirty of these cases, a trace was present in six cases, and none in two. There appeared to be no relation between the amount of cholesterol present and the intensity of the Wassermann reaction, nor could any relation be discovered between the amount of cholesterol and the clinical state. No measurable amounts of cholesterol were found in the cerebro-spinal fluids in cases of dementia simplex, dementia praecox, or epilepsy with insanity.

534. The Reactions of Typhoid Vaccination.

H. J. NICHOLS and A. P. HITCHENS (*Journ. Lab. and Clin. Med.*, March, 1926, p. 517) attempt to explain why recent progress in the active immunization to diphtheria and scarlet fever has not been paralleled in the case of typhoid fever and why it is not yet possible by skin or other tests to distinguish susceptible persons from the immune. The agglutination titre of the blood is not the measure of the degree of immunity in all cases, and no true toxins have yet been isolated. The authors tabulate severe vaccination reactions under two headings—namely, immediate or anaphylactic, and late or toxic; which suggests the possibility of there being two factors in a reaction—the bacterial or allergic, and the toxic. They think that there is also a considerable non-specific element which renders the problem more difficult, but they have noted in some instances that severe reactions may be foretold by immediate skin reactions. They suggest that fractional chemical investigation of the bacilli and their derivatives, together with the experimental use of these fractions in skin tests, may be a fruitful line of research, and also that a more careful classification of the clinical reactions to typhoid vaccination is required.

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

535. Pulmonary Tuberculosis following Surgical Operations.

F. BEZANÇON and A. JAQUELIN (*Paris Méd.*, March 27th, 1926, p. 293) state that adult pulmonary tuberculosis may occasionally follow an infantile infection which has been reactivated by some surgical operation. Several French writers since Verneuil (1883) have recorded cases of pulmonary tuberculosis following an operation on an old tuberculous lesion, but the present authors have seen seven cases following operations (hysterectomy, appendicectomy, or herniotomy) upon organs entirely free from tuberculous lesions. The gravity of surgical procedures in cases of active tuberculosis is generally recognized, but it is less well known that patients who are free from all signs of active tuberculosis may develop a serious or fatal attack after an ordinary surgical operation. These seven cases within the last two years show that such occurrences are not rare, although the authors have been unable to find any reference to similar cases in any recent works. They believe that some anaesthetics are more toxic than others, that administration of those which have a toxic action on the liver is most likely to be followed by pulmonary tuberculosis, and finally that systematic cuti-reactions among convalescents from operations show, not infrequently, a true post-operative anergy. The authors mention 4 male patients whose ages ranged from 24 to 38; of these, 2 died shortly after operations for gunshot wounds, and the other 2 patients were still living but showed signs of advanced pulmonary tuberculosis. Of the 3 female patients (aged 19, 32, and 35 respectively) 1 died of pulmonary tuberculosis a year after a double ovariotomy and 1 died of the same disease six weeks after hysterectomy. The authors conclude that both ether and chloroform anaesthesia may be followed by pulmonary tuberculosis and that nitrous oxide is free from that risk. Spinal anaesthesia is also said to be quite safe in this respect. Ether was the anaesthetic used in 4 cases and chloroform in 3 cases.

536. The Protein Content of Toxin-Antitoxin.

E. L. BAUER and H. B. WILMER (*Journ. Amer. Med. Assoc.*, March 27th, 1926, p. 942) find that the toxin-antitoxin made in accordance with Park's technique is remarkably free from the protein element both from the clinical and from the laboratory standpoint. In a series of 100,000 children twelve contracted diphtheria either during or shortly after administration of toxin-antitoxin, and were given antitoxin with no evidence of hypersensitiveness. The same was true of a hundred diphtheria contacts who had not had time to develop immunity. Bauer has kept under observation for a period of from one to five years 150,000 children, most of whom had been fully immunized with toxin-antitoxin, and found that none of them gave any marked reaction with toxin-antitoxin or showed any tendency to protein sensitivity by test six months after the injections. The authors are therefore convinced that in the use of a properly made toxin-antitoxin mixture no hypersensitivity to horse protein is developed, and that it is safe and wise to give toxin-antitoxin in asthmatic persons known to be susceptible to diphtheria. To assume that hypersensitivity is developed by toxin-antitoxin it must first be proved that hypersensitivity was not present before the administration of toxin-antitoxin, since those hypersensitive to horse protein do not react to the infinitesimal amounts of protein present in the toxin-antitoxin mixture.

537. Blister Fluid in the Serum Prophylaxis of Measles.

P. MODINOS (*Bull. et Mém. Soc. Méd. des Hôp. de Paris*, March 18th, 1926, p. 404) states that since the first introduction of serum prophylaxis in measles the method has presented the following drawbacks: (1) the difficulty in obtaining convalescents' serum, (2) the uncertainty as to whether tuberculosis, syphilis, and malaria were present in the donor or not. Modinos has recently employed blister fluid from measles convalescents in doses of 3 to 5 c.cm., as it presents the following advantages: (1) It is much easier to obtain 10 to 15 grams of serum by a blister applied to a child of 6 to 10 years of age than the same quantity by puncture of a vein. (2) Therefore anyone will submit to the application of a blister and removal of the fluid, whereas few children readily submit to removal of a much larger quantity of whole blood. (3) The transmission of malaria is excluded, as the plasmodium is not found in blister fluid, even during severe attacks of malaria. As regards tuberculosis and syphilis, these diseases are not only more common above the age of 20, but when occurring in children are so obvious that such subjects can be excluded at once from acting as donors.

538. Rheumatic Aortitis.

F. BEZANÇON and M.-P. WEIL (*Ann. de Méd.*, February, 1926, p. 174) review the literature and record a personal case in a girl, aged 21, who developed her first attack of acute rheumatism at the age of 14, when the heart was not affected. The following year she had a second attack, when the existence of rheumatic endocarditis was detected. The third attack, which occurred five years later, was subacute in character, almost entirely apyrexial, and principally involved the aorta. The first part of the vessel was affected not only in the valves but in the trunk as well. The ascending portion was found on *x*-ray examination to be the seat of a cylindrical dilatation which was revealed clinically by a thrill and a pulsation which was most prominent in the right presternal region. There was a loud systolic murmur at the base of the heart conducted towards the outer half of the right clavicle, and a less intense diastolic murmur conducted towards the xiphoid process. The aortitis was in no way affected by salicylate treatment. Two subsequent radioscopic examinations at intervals of twenty months showed the progressive character of the aortic lesions, which were accompanied by slight though persistent pains in the joints as well as by deformities of the fingers and marked amyotrophy of the small muscles of the hands.

Surgery.

539. Median Sternotomy in Mediastinal Tumours.

H. GAUDIER (*Bull. et Mém. Soc. Nat. de Chir.*, March 6th, 1926, p. 245) has recently had occasion to try the effect of median sternotomy to relieve the pressure effects in a case of a malignant tumour arising in the mediastinum. The patient had been operated on eleven years previously for carcinoma of the breast; this was followed by a recurrence in the mediastinal glands. There was much swelling of the arm on the affected side, which presented the appearance of elephantiasis; trophic ulcers developed on the fingers, and there was also severe pain. Radiographic examination showed the presence of a large mass, probably arising in the glands in the mediastinum. Treatment by deep therapy appeared to aggravate the symptoms by giving rise to pressure effects. As the conditions were becoming intolerable it was decided to attempt a decompression operation on the mediastinum. Laryngoscopy and oesophagoscopy brought to light no paralysis or obstruction, although the patient could only swallow with difficulty. The sternum was divided in the mid-line under local anaesthesia and without difficulty. A separation of 3 cm. was obtained and the symptoms were immediately relieved. The wound was closed with drainage. The condition of the patient was much improved and she could swallow and sleep with much comfort. Deep *x*-ray therapy was started again and caused no trouble. The operation appears one which has definite indications in such cases and there is little risk in its performance.

540. Gaucher's Disease.

E. H. CUSHING and A. P. STOUT (*Arch. of Surg.*, February, 1926, p. 539) remark that although Gaucher's splenomegaly has striking clinical characteristics the diagnosis has rarely been made except by the microscope. The only treatment that has found favour has been splenectomy, but little is known about the late results of this operation. In forty-nine cases which have been analysed the authors find that the symptoms usually appear in childhood; sixteen patients were over 30 years of age, and females are more often affected than males. There is marked splenic hypertrophy. One of the most striking signs is the discoloration of the skin, which becomes bronze or brownish-yellow. The blood picture shows anaemia and consistent leucopenia; no abnormal cells are present, and the coagulation time appears normal. There is also a peculiar wedge-shaped thickening of the conjunctiva yellowish in colour. The liver also enlarges and there is a definite haemorrhagic diathesis. The lymph glands are not enlarged and ascites is rare. There may be destruction of the bones and an osteoarthritis with subsequent formation

of a sequestrum. The usual medical treatment for anaemia is given; transfusions and radiotherapy have failed to arrest the disease. The authors add that enough evidence is not available as yet to show that splenectomy actually prolongs life. The general health after this operation is, however, improved and the tendency to bleed is diminished. The etiology of the disease is at present unknown.

541. Myxochondrosarcoma of the Knee.

F. FEDELI (*La Chirurgia degli Organi di Movimento*, February, 1926, p. 209) publishes a case of myxochondrosarcoma of the capsule of the knee-joint in a man aged 20; the symptoms had lasted two years. The starting-point of the disease was an injury, after which the knee slowly increased in size. There was a family history of tuberculosis, and the patient himself showed signs of a chronic affection at the left apex, probably tuberculous. The skin reaction was feebly positive. The knee was painful after prolonged standing or exercise and became swollen. There was some fluid in the joint, which was slightly flexed, and movement was very limited and painful: there was some hypertrophy of the thigh muscles on the affected side. Radiography showed some rarefaction in the femoral epiphysis. The Wassermann test was negative. The temperature of the skin over the knee was not raised, but the superficial veins were visible and dilated. There were no sinuses, and the general condition of the patient was good. The thigh was amputated in the upper third and a myxochondrosarcoma was found invading the knee-joint and destroying the articular cartilage.

542. Surgery in Diabetes.

E. S. JUDD, R. M. WILDER, and S. F. ADAMS (*Journ. Amer. Med. Assoc.*, April 10th, 1926, p. 1107) report the results of four years' experience in endeavouring to minimize the mortality rate of surgery in the presence of diabetes. Insulin was given to control glycosuria, and four days before operation a diet was prescribed containing 140 grams of carbohydrate in order to build up a reserve of glycogen and thus prevent post-operative acidosis. After the operation treatment consisted in the administration of glucose by proctoclysis until post-anaesthetic nausea had disappeared; it was then continued in the form of fruit juices and ginger ale by mouth, sufficient insulin being given in repeated doses so that at least 75 grams of glucose was metabolized every twenty-four hours, the slightest clinical evidence of acidosis being the signal for active treatment. By placing all diabetics under one service in hospital no opportunity was given for any interruptions in precise dietetic and insulin treatment both before and after operation, the purely surgical problems and the choice of anaesthetic being left to the surgeon. Ether was used in the majority of cases, but the authors think that local anaesthesia is desirable provided that it does not entail any undue prolongation of the operation. It was found that the delay in the healing of operation wounds was not greater than usual provided that the diabetes was controlled; the healing of chronic ulcers may possibly be stimulated by the direct application of insulin to the wound. The authors suggest also that diabetic patients should be referred for operation to hospitals where surgeons may be able to co-operate with physicians experienced in the treatment of diabetes.

543. Strangulated Hernia.

A. J. BELLER and R. COLP (*Arch. of Surg.*, April, 1926, p. 901) discuss the viability of the intestines in the sac in cases of strangulated hernia. In two recent cases the contents of the sac were thought viable and were replaced in the abdomen; subsequent necropsies, however, showed gangrene and peritonitis. The majority of cases of strangulation occur in the fourth to the sixth decade; this is probably due to greater straining and coughing. There is usually sharp pain and vomiting and often constipation. The authors state that operation is the only treatment and that taxis is an inheritance of preaseptic surgery. Local anaesthesia is preferable. The viability of the intestine is of prime importance. In 47 doubtful cases 14 patients subsequently died from intestinal obstruction or peritonitis. The intestines appeared viable at operation, yet there was progressive destruction of the bowel wall leading to gangrene. The patients were usually over 50 years of age, and there was sclerosis of the vessel walls. In doubtful cases most surgeons are unwilling to resect, yet in such cases the mortality might be lowered by the more radical operation. Resection need not necessarily be performed in doubtful cases; the gut can be left exposed in the wound for six to eight hours before deciding its fate. Where it is gangrenous resection and anastomosis is to be preferred to enterostomy. If obstruction has been present for some time a jejunostomy may be advisable to drain the higher bowel, and this lessens toxaemia. Early operation and local anaesthesia will lower the mortality. Jejunostomy may be useful when strangulation has lasted for more than twelve hours.

Therapeutics.

544. Atophanyl in Rheumatism.

M. BOSTLUND (*Ugeskr. f. Laeger*, February 11th, 1926, p. 130) has found various rheumatic conditions, including lumbago, torticollis, and neuralgia, to react very satisfactorily to atophanyl, which is a mixture of equal parts of atophan and sodium salicylate. Each ampoule, prepared by Schering of Berlin, contains 0.5 gram of each drug, a small quantity of novocain being added. During the past eighteen months the author has given more than a hundred intravenous injections to about thirty patients with uniformly good results, which in some cases are quite dramatic. In rheumatic fever this treatment not only relieved pain, but reduced the temperature. In chronic arthritis and severe forms of sciatica he had to admit that the beneficial action of this treatment was only transitory. In only one case did he give more than one injection a day, and he found the intramuscular route too painful. The intravenous injections were, as a rule, painless; when pain did occur it passed off in a minute or two after the arm was raised. The intravenous injection should be undertaken slowly, and it is well to aspirate 5 c.cm. of blood into the syringe so as to mix it with the solution before this is introduced. L. PETERSEN (ibid.) recommends the intravenous injection once a day of atophanyl for various rheumatic conditions, and he supplements this treatment by giving 0.25 gram of potassium iodide and 0.25 gram of urotropine by the mouth three times a day. Under atophanyl treatment pain in the joints rapidly diminishes, tophi disappear, and the excretion of uric acid is much increased. After a daily injection has been given for five days, it is discontinued for eight days, during which massage and the administration of potassium iodide and urotropine is continued. The intravenous injections of atophanyl are then repeated, five being given, one every other day. Meanwhile the massage and the exhibition of potassium iodide and urotropine are continued. More than twenty injections should not be given. The action of the atophanyl is lasting and, in the author's opinion, is much more certain than that of colchicin preparations, the toxic effects of which are not provoked by atophanyl.

545. Acriflavine in the Treatment of Gonorrhoea.

L. FERRON and COSNIER (*Gaz. Hebd. des Sci. Méd. de Bordeaux*, April 25th, 1926, p. 260) find that diamino-methyl-acridine hydrochlorate, termed variously trypaflavine, acriflavine, and gonacrine, is a most efficient urethral antiseptic. Whereas protargol fails to arrest the growth of cultures of the gonococcus in 1 in 500 solutions, acriflavine arrests development of cultures *in vitro* when diluted to 1 in 300,000. The authors have adopted Jausion and Diot's intravenous method of administering acriflavine, the usual dose being 5 c.cm. of a 1 in 50 dilution every second day. It is claimed that the drug is carried by the blood stream to the epithelium of the various periurethral glands which is inaccessible to ordinary injections. Usually there is no local or general reaction, but some patients complain of a bitter taste, constriction of the throat, and flushing of the face; transient palpitation sometimes occurs, and even vomiting. Acriflavine appears in the urine within an hour after its intravenous injection, and it continues to be eliminated for twenty-four hours. The authors give details of nine cases of urethritis; of these, one had received previous injections of silver nitrate and others had had urotropine, alkalis, and potassium permanganate injections. These patients received from nine to fifteen injections of acriflavine, the average being 12.25. The average duration of treatment was twenty-six days. Eight patients were cured; in one, after fifteen injections gonococci were still present in the pus. In addition, two patients who had severe gonococcal cystitis were cured after five injections given on alternate days. One patient with gonorrhoeal arthritis of two months' duration had had hot-air baths and the actual cautery without benefit. He received eight injections of gonacrine during a period of fourteen days. After the fifth injection the pain disappeared and the swelling was diminished; the patient was able to get up and walk. After eight injections he was discharged, cured. The authors state that after more than twenty years' experience of many methods they are convinced that no other treatment can yield such excellent results.

546. Insulin-Glucose Treatment in Post-operative Vomiting.

CLAUDIA POTTER (*Anesthesia and Analgesia*, April, 1926, p. 69) reports 185 operation cases in which insulin-glucose was given as a routine measure for the purpose of estimating its value in the prevention of post-anaesthetic vomiting. From this experience, as well as from its trial in selected cases in which acidosis or surgical shock might be anticipated, and in very toxic cases, she concludes that this combination appears to

be a very potent remedy in post-anaesthetic vomiting, the best results having been obtained in cases of acidosis and toxaemia. More caution in the administration of insulin is needed in the non-diabetic than in the diabetic patient, and, absorption of glucose by the rectum being uncertain, the effect of insulin requires closely watching. The glucose was given by the mouth or rectum thirty to forty minutes before operation, allowing at least 2 grams of sugar for each unit of insulin when given by the mouth and 3 grams when given by the rectum. Five units of insulin were injected hypodermically twenty to thirty minutes after giving glucose by mouth, and forty to fifty minutes when given by rectum. In severe cases needing glucose intravenously 10 units of insulin were given about ten minutes later, but it is stated that this method is not advisable unless vomiting is persistent and fails to yield to the use of insulin with glucose by mouth or rectum.

Anaesthetics.

547. Anaesthesia for Upper Abdominal Operations.

J. T. MASON (*Annals of Surg.*, April, 1926, p. 453) compares the post-operative conditions following local and general anaesthesia in 100 consecutive upper abdominal operations, 50 being performed under ether and 50 under local or local and gas anaesthesia; all were performed by the same surgeon in the same hospital and with the same surgical and nursing staffs. It was found that general anaesthesia produced considerably more effect upon the kidney, liver, and lung tissues than was the case with local anaesthesia. General anaesthesia was induced by nitrous oxide gas and oxygen and continued with open ether; local anaesthesia was induced by infiltrating the anterior abdominal wall, followed by anterior splanchnic block, with a 0.5 per cent. solution of procaine in 0.6 per cent. sodium chloride with nine drops of adrenaline chloride added to each 100 c.cm. Mason states that individual sensitiveness to pain and apprehension are important factors in determining the success or otherwise of a local anaesthetic and that it is important to ensure rest, sleep, and a high glycogen reserve; a narcotic should be administered one hour before operation. Under local anaesthesia the average duration of operations was eight minutes longer than for those under general anaesthesia, but the temperature remained lower and the average stay in hospital was three days less. Vomiting occurred in 18 of the local anaesthetic cases as against 33 under general anaesthetics; in the latter it was more marked and persistent. In no case of local anaesthesia was there any sign of shock.

548. Ethylene as an Anaesthetic.

C. L. HEWER (*Brit. Journ. Anaesthesia*, April, 1926, p. 174) reviews the present position of ethylene as an anaesthetic, and concludes that it possesses advantages in certain cases and especially for operations of medium severity lasting for a considerable time. A satisfactory degree of anaesthesia can usually be obtained with a mixture of 80 per cent. ethylene and 20 per cent. oxygen, and, provided the oxygen is not cut down unduly, the changes in blood pressure, pulse rate, and respiration are negligible. Since more oxygen can be given with it than with nitrous oxide it is useful in quite young children and patients classed as "bad risks"; the ethylene-oxygen combination appears to have less effect upon the blood sugar than any other of the general anaesthetics except the mixture of pure nitrous oxide and oxygen. Its elimination is rapid and it is rare for the patient to vomit more than once, while post-anaesthetic acidosis and pulmonary complications are not greater than those following local analgesia. It is contraindicated in operations involving the use of naked flames or the cautery near the face, and in *x*-ray examinations on account of its explosiveness when mixed with more than 40 per cent. oxygen or between 75 and 95 per cent. air; among its drawbacks are its odour and the impossibility of obtaining absolute muscular relaxation; but in an average case it affords a method of rapid and pleasant induction with moderate relaxation without cyanosis, and a quick recovery with few after-effects. Hewer considers that its advantages in certain cases are not possessed by any other anaesthetic agent.

549. Nitrous Oxide Anaesthesia.

E. DESMAREST (*Presse Méd.*, April 14th, 1926, p. 465) recommends nitrous oxide as the safest anaesthetic in serious cases, such as in anaemia, diabetes, severe infections, or toxaemia, as well as for patients suffering from chronic bronchitis and emphysema, with or without cardiac dilatation. The author has employed nitrous oxide in excision of the rectum and Wertheim's operation, as well as in less severe intraperitoneal operations, with complete success and without any subsequent ill effect. Desmarest employs ether in conjunction with nitrous oxide in many abdominal operations in order to lessen the forcible and deep inspirations which the latter induces. On account of its safety and absence of after-effects it is particularly suitable for relief of pain during the removal of gauze drains in such conditions as cholecystotomy and vaginal drainage. Anaesthesia is rapidly induced and the gauze can then be removed quite painlessly, even when very adherent; similarly, it is of great assistance in the dressing of painful wounds and burns. Although nitrous oxide is the safest anaesthetic it requires special skill in the anaesthetist and great patience in the surgeon. The deep and forcible respiration often inconveniences the operator, while the partial asphyxiation increases the bleeding from the wound; consequently a larger number of bleeding vessels have to be secured than is usual under other anaesthetics. Desmarest has discovered that during nitrous oxide anaesthesia and for half an hour afterwards the coagulability of the blood is almost abolished; post-operative haematoma is therefore not uncommon. Post-anaesthetic vomiting is not uncommon after nitrous oxide, but it is usually controlled by ordinary methods. Desmarest has had only one death. During the performance of a gastro-enterostomy for duodenal ulcer in a man, aged 45, there was practically no bleeding from the incisions, and the author thinks that this exsanguine condition should have warned him of the impending heart failure. This was probably due to myocardial degeneration following an attack of enteric fever two years previously.

550. De-etherization with Carbon Dioxide.

ETHEL RIGHETTI (*Anesthesia and Analgesia*, February, 1926, p. 8) states that the normal carbon dioxide tension in the blood is about 40 mm. Hg; any increase produces hyperpnoea and a decrease produces apnoea. The inhalation of this gas combats respiratory depression, especially when due to anaesthesia. It has been found that after ether anaesthesia 50 per cent. of the ether content of the blood is eliminated in the first half-hour and the bulk of the remainder in from one to two hours, although traces may remain in the blood for two or three days. Even light anaesthesia usually depresses the respiration, especially if a preliminary hypodermic injection of morphine has been given. The elimination of ether from the blood can be accelerated by inhalation of carbon dioxide, which increases the respiratory rate and volume. Consciousness is usually restored in a few minutes after the cessation of the anaesthetic by administration of the gas, which is given usually for five minutes; stimulation is almost instantaneous, the face flushes, and respiration becomes deep and rapid. The author has used it in forty-six cases, and adds that the rapid return to consciousness relieves depression and lessens nausea and vomiting. She thinks that it undoubtedly prevents inhalation pneumonia by relieving the partial atelectasis of the lower lobes, which occurs in prolonged abdominal operations, and suggests that an emergency supply of carbon dioxide in the operating theatre is of more value than a cylinder of oxygen.

Obstetrics and Gynaecology.

551. Intraperitoneal Bleeding from Uterine Chorion-Epithelioma.

W. L. BUTOMO (*Zentralbl. f. Gynäk.*, April 10th, 1926, p. 1034) records the case of a woman aged 23 who, after curetting of a two months' abortion, suffered from menorrhagia with gradually increasing haemorrhage, which became continuous six months later. The bleeding was arrested by a second curetting, but the patient had repeated syncopal crises and became extremely anaemic. Examination showed a retro-uterine haematocele, and an operation was performed for a supposed ruptured ectopic gestation. The haemorrhage was found to have come from a small tear in the posterior wall of the fundus, which was almost entirely replaced by a new growth, shown microscopically to be a chorion-epithelioma and containing abundant syncytial tissue but few Langhans's cells. The author has collected nine cases of intraperitoneal bleeding due to a similar cause: the pre-operative diagnosis was invariably ectopic pregnancy. One patient died before, and three (as also the author's patient) immediately after, the operation. In three cases, although very extensive new growth was present, the intraperitoneal bleeding was the sole symptom.

552. Functional Uterine Haemorrhage.

E. NOVAK (*Journ. Amer. Med. Assoc.*, April 10th, 1926, p. 1105) urges the importance of diagnostic curettage in the treatment of functional uterine haemorrhage of sufficient severity to cause concern, as in no other way can its cause be ascertained and uterine carcinoma excluded. In many cases curettage affords a permanent cure, though in more than half the

symptoms may recur. Daily injections of 1 c.cm. posterior pituitary extract appear to give better results than the administration of thyroid or ovarian extract, though this may be due to its action on the uterine muscle rather than to any endocrine effects. When bleeding recurs even after thorough curettage repetition of this procedure at intervals may be the best treatment in young women, since the possibility of future child-bearing has to be considered. Though careful radiotherapy will generally relieve the symptoms without any ill effects, it has to be borne in mind that there is some attendant risk to the ovaries, and many gynaecologists hesitate to resort to its use unless other measures fail. Novak advises placing the facts before the patient and her friends, and his experience is that most young women will select repetition of curettage rather than the slight uncertainty of the results of radium. In uncomplicated cases about the menopause radium therapy is, he thinks, the ideal course to adopt, hysterectomy being reserved for those cases in which there is some associated lesion necessitating laparotomy.

553. Axillary Prolongation of the Breast.

C. H. FOUCHE (*South African Med. Record*, April 10th, 1926, p. 154) describes the occurrence of an abnormally large "axillary tail" of the breast in a primipara, aged 23. Three days after delivery a painful lump appeared in the right axilla, concurrently with engorgement and pain in both breasts. On the next day the lump increased in size and a second swelling appeared between it and the upper lateral quadrant of the breast. With the establishment of the secretion of milk on the next day both swellings became less painful and softer. It was then possible to trace a broad, mobile, flattened band of breast tissue, extending from the upper lateral quadrant of the breast along the lower and outer margin of the pectoralis major into the axilla; it was incorporated with both swellings, which had the feel and consistency of breast tissue. A much smaller lump was found in connexion with the breast of the opposite side, but this caused no pain or discomfort. The author comments on this condition, termed the "axillary tail of Spence," and indicates the lines of differential diagnosis. He draws attention to the theoretical possibility of such an abnormally situated portion of mammary tissue becoming malignant, and raises the question of the desirability of its excision.

554. Pelvic Examination during Labour.

P. BAUMM (*Zentralbl. f. Gynäk.*, April 3rd, 1926, p. 846), as the result of an analysis of 864 consecutive cases of labour, finds that a vaginal or rectal examination is required in only 8 per cent. It is necessary, however, when the head fails to become engaged at the pelvic brim and there is reason to fear prolapse of the cord, when the presentation is uncertain, when the pelvic diameters and anatomical relations have not been determined previously, when the foetal heart sounds are feeble, in haemorrhage, and in abortion between the sixth and seventh months. Among forty-one cases in which the head was unduly mobile prolapse of the cord occurred seven times. Twice this accident was recognized by rectal examination, in the remaining five cases by subsequent vaginal examination. In nineteen cases the presentation could not be determined by external examination; the presentations were either of the head or breech in the majority of cases. In eight of these rectal examination sufficed, but in the remaining eleven cases subsequent vaginal examination was required. Rectal examination was sufficient in two cases that required pelvic exploration; in a third case subsequent vaginal examination was necessary. In eight cases of haemorrhage due to placenta praevia rectal examination failed; it also proved useless in the two cases of abortion. Baumm adds that rectal examination yielded negative or incorrect results in 26.7 per cent. of all cases. The results were incomplete and somewhat misleading in 55 per cent., and in only 17.7 per cent. was a correct diagnosis made after rectal examination alone.

Pathology.

555. Filterable Forms of Tubercle Bacilli.

A. FESSLER (*Centralbl. f. Bakt.*, April 1st, 1926, p. 148) has examined the evidence on which French workers have concluded that there exist filterable forms of tubercle bacilli, and has made a series of experiments himself in an endeavour to confirm their results. He used eleven strains of tubercle bacilli of human, bovine, and avian varieties. Cultures varying from one to four months old were ground up thoroughly in broth and filtered through a Chamberland L3 candle. The filtrate was mixed with a liquid medium, such as glycerin broth or potato broth, and incubated at 38°C. In two cases there appeared a turbidity in the tubes after three weeks, and on microscopical examination a number of threads were found, dotted with small granules; none, however, were acid-fast. The conclusion that these threads were bacterial forms was falsified by the discovery that a turbidity was also present in uninoculated tubes of medium which had stood in the incubator for some weeks; microscopical examination showed similar thread forms. It appeared, therefore, that these bodies were the result of precipitation of the peptone. Animals inoculated with them remained well. Further experiments were undertaken to ascertain if the filtrates of cultures of tubercle bacilli or of tuberculous pus were pathogenic to animals; with one exception all the results were negative. In the isolated instance one guinea-pig which had been injected intraperitoneally with the filtrate of a human culture died about three months later, and at autopsy a tuberculous condition of the lungs and tracheo-bronchial glands was found. That this had nothing to do with the injection but was due to an aerogenic infection was evident from the distribution of the lesions and from the fact that another guinea-pig injected intravenously with the same filtrate remained perfectly well. Fessler's general conclusions are that the evidence in favour of there being filterable forms of tubercle bacilli is so far quite insufficient and that the results of the French workers are perhaps due to faulty technique.

556. Sedimentation Rate of Red Blood Cells.

H. N. COOPER (*Journ. Lab. and Clin. Med.*, April, 1926, p. 615) has studied the rate of sedimentation of the red blood cells in a number of different diseases. The method he uses is to withdraw about 10 c.cm. of the patient's blood, mix it in a bottle with the residue left by the evaporation of three drops of 20 per cent. potassium oxalate solution, and to deliver 5 c.cm. into a graduated test tube. The tube is placed in a rack, and readings are taken of the level to which the cells have settled after periods of 5, 10, 15, 30, 45, and 60 minutes. The results are plotted on a graph in which the ordinates represent the height of the column of cells and the abscissae the time in minutes. In the normal person the height of the cell column after one hour varies from 2.5 to 4.5 cm. In acute inflammation there is an acceleration in the rate of deposit, apparently coincident with the rise in the number of leucocytes. A rapid rate of deposit therefore signifies a high leucocytosis and is of good prognosis. In tuberculosis, both pulmonary and non-pulmonary, the rate of sedimentation varies with the activity of the disease and the general condition of the patient. In the early stages the rate is little altered; later on it increases. The worse the involvement, the faster is the fall in the level of the cells. Cases that are recovering show a normal rate. In pregnancy the rate of sedimentation increases; the test has been used to distinguish this condition from myomata of the uterus. In one case examined by the author in which pregnancy was associated with eclampsia and acute nephritis the fall of the cells was extremely rapid. The sedimentation rate, however, diminished a week before her non-protein nitrogen began to fall, and was thus of prognostic value in her recovery. Lastly, in malignant conditions the rate of sedimentation is increased, apparently in relation to the degree at which the tumour is advancing. It will be seen that the sedimentation rate is increased in diseases attended by tissue degeneration and destruction. The increased rate is said to be dependent on an increase of cholesterol, globulin, and fibrinogen, in the blood.

557. Liver Function Tests.

S. S. BERGER, M. B. COHEN, and J. J. SELMAN (*Journ. Amer. Med. Assoc.*, April 10th, 1926, p. 1114) report the results of a comparative study of five methods of testing the liver function in a hundred clinical cases. The tests, performed simultaneously or within forty-eight hours of each other, were the van den Bergh test, the Widal test (haemoclasic crisis), Rosenthal's test, the examination of the urine for urobilin (Schlesinger's method) and urobilinogen (Ehrlich's reagent), and the Hay test for bile salts. The authors state that since these tests represent different liver functions, any one of which may be impaired, they do not give parallel results. It was found that when all the tests were positive liver disease of a clinically severe type with toxic jaundice was indicated; when four were positive and one negative clinical liver disease of a chronic type, such as that in Banti's disease, pernicious anaemia, or cirrhosis was present. In every case in which all the tests, except the Widal, were positive there was obstructive jaundice due to tumour, a finding of considerable value in differential diagnosis. When only three of the tests were positive it was impossible to correlate the findings with the clinical picture. The authors consider that the tests are of value chiefly in differential diagnosis, and in following the progress of a given case; they afford the greatest amount of information when they are all performed simultaneously and repeated often.

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

558. Measles complicated by Gangrene of the Legs.

D. J. HISHON and J. D. ROLLESTON (*Brit. Journ. Child. Dis.*, January-March, 1926, p. 47) report the case of a male infant, aged 16 months, suffering from measles complicated by bronchopneumonia, who developed dry gangrene of both legs ten days after the onset. Death occurred five days later. At the necropsy both superficial femoral and popliteal arteries were found to contain ante-mortem blood-clots throughout their entire length. An infarct was present in the left kidney and a larger vegetation occupied the upper surface of the anterior aortic valve. Rolleston, who has collected eleven other cases from the literature, remarks that gangrene of one or more limbs, which is a very rare complication of an acute infectious disease, is one of the most interesting, as it appeals alike to the physician, surgeon, and medical historian. Gangrene of the limbs occurring in fevers is mentioned by Hippocrates, and recovery of patients in the Plague of Athens, after loss of their hands, feet, and genitals, is recorded by Thucydides. Of the twelve cases of gangrene of the limbs following measles, all but two occurred in children aged from 11 months to 13 years. Six were males, five were females, and in one the sex was not recorded. In all but Munk's case, in which the hand was involved, one or both lower extremities were affected. Five recovered, five died, and in two the issue is not recorded. Operation was performed in six cases, four of which recovered, one died, and in one the result is not stated. The attack of measles was severe in all, and in five the presence of bronchopneumonia was noted. Although gangrene of the extremities as a sequel of an acute infectious disease is usually attributed to an autochthonous thrombosis due to acute arteritis, in the present case the origin of the gangrene was undoubtedly embolic, in view of the definite cardiac lesion and the infarct in the kidney.

559. Anaphylaxis following Administration of Serum.

C. A. STEWART (*Journ. Amer. Med. Assoc.*, January 9th, 1926, p. 113) has recently met with seven instances of anaphylactic reactions after administration of serum in children who had previously been immunized by toxin-antitoxin against diphtheria. The first case occurred after prophylactic injection of tetanus antitoxin in a child who had been given toxin-antitoxin one year previously, five others followed prophylactic injection of scarlet fever antistreptococcus serum in children who had been immunized from eight to eleven months previously, and the seventh followed therapeutic injection of diphtheria antitoxin in a child who had received toxin-antitoxin three months previously. Although no deaths occurred, Stewart considers that the reactions should serve as a warning to use care in the administration of serums derived from horses in children who have been previously sensitized by injection of toxin-antitoxin. Larson has recently introduced a method of immunization against diphtheria without serum (*Epitome*, October 31st, 1925, para. 382), and Stewart thinks that the perfection and standardization of this method will prove a distinct contribution to medical science.

560. Alcohol and the Expectation of Life.

K. A. HEIBERG (*Ugeskr. f. Laeger*, March 11th, 1926, p. 251) traces the influence of alcohol restrictions, adopted in Denmark during the war, on the death rate in Copenhagen, and states that in 1917 the death rate among men in the ten-year age group 45 to 54 was only 14 per 1,000, whereas in the period 1910–14 it was 19 per 1,000 in the same age group. With regard to the objection that this decline in the death rate might largely be due to abstemiousness in feeding enforced by the war, he explains that the food rationing implied a change rather than a reduction in the dietary of the Dane, and that in the same period and age group there was no decline in the death rate for women, who, on the other hand, were not so addicted to alcohol as the men. Statistics are also quoted by the author showing that, whereas the death rate is considerably higher in the males than in the females of most age groups, this difference has been greatly reduced of late within certain age groups. Thus, in the period 1903–07, the death rate for the age group 26 to 35 was 39 per cent. higher for males than for females. In the period 1923–24 this difference was completely wiped out for the same age group. Again, in the next ten-year age group, 36 to 45, the excess of the male over the female death rate declined from 61 to 16 per cent. In the third ten-year age group, 46 to 55, there was a fall from 80 to 11 per cent. in the excess of the male over the female death rate. It is pointed out that the age group under review—that is, 26 to 55—is the one in which indulgence in alcohol by men is most common.

561. Spirochaetosis Icterohaemorrhagica and Paratyphoid Bacilliaemia.

F. WIDAL and R. J. WEISSENBACH (*Bull. et Mém. Soc. Méd. des Hôp. de Paris*, March 18th, 1926, p. 434) report a case, in a boy aged 15, who developed a febrile jaundice of sudden onset with slight epistaxis, but no other haemorrhages. On the fifteenth day the temperature, which had been normal for over a week, rose again suddenly to 104°, and the patient complained of violent headache, without, however, showing any other meningeal signs. There were two subsequent recurrences of fever. The case was therefore a typical one of relapsing jaundice with a well developed febrile infective syndrome and abortive haemorrhagic manifestations. Laboratory examination showed the spirochaetal origin of the jaundice, and examination of the blood and urine showed the coexistence of an organism somewhat resembling *B. paratyphosus* A, but more closely allied to *B. paratyphosus* B. The presence of this organism did not aggravate the disease, as there was no typhoid state, and no rose spots, diarrhoea, or intestinal symptoms.

Surgery.

562. Tuberculosis of the Caecum.

J. W. LARIMORE and A. O. FISHER (*Annals of Surgery*, April, 1926, p. 496) find that primary tuberculosis of the intestine in the adult is comparatively rare; secondary to lung infection it is found in 60 to 90 per cent. of cases ending fatally. The ileo-caecal segment is the usual portion of the intestine affected. Caecal tuberculosis occurs in three pathological forms—fibrous, ulcerative, and hyperplastic. The clinical symptoms of the primary type are not conclusive at first, but are chiefly those of partial obstruction. Tenderness and a palpable mass are usually late occurrences, as is also diarrhoea. Early diagnosis is essential for surgical treatment, and *x*-ray observations show alterations of the intestinal contour by filling defects, spasms, and disturbances of alimentary motility. In the secondary form an unfavourable prognosis is usually given. There appears to be no better treatment than the surgical. The authors report five cases operated on with four deaths. Surgical treatment in the hyperplastic form of intestinal tuberculosis is usually favourable, in contrast with the ulcerative type; this differs markedly from the secondary type associated with pulmonary lesions. In cases of resection the lower three or four inches of the ileum are included and after mobilization the part is brought out of the abdomen; the ileum is usually anastomosed to the transverse colon. The cases with extensive pulmonary disease were relieved; without operation their condition would have been hopeless. The authors conclude that in selected cases surgery is justifiable; with *x*-ray examinations such cases may be detected and the extent of the lesion determined.

563. Infectious Muscular Erosion.

M. WOLFSON and LL. BRYAN (*Boston Med. and Surg. Journ.*, April 1st, 1926, p. 586) record a case of infectious muscular erosion causing hernia of the large bowel in the lumbar region, and remark that the case is instructive, showing to what an undiagnosed appendix abscess may lead. A married woman, aged 38, was admitted to hospital complaining of pain in the right lower abdomen accompanied by a low-grade septic temperature. There was a history of Caesarean section seven years previously, and successful haemorrhoidectomy, trachelorrhaphy, and anterior and posterior colpoplasty a month ago. The *x*-ray examination and blood and urine analyses were negative, and she was discharged on a diagnosis of hysteria with post-operative adhesions. On two subsequent occasions she was readmitted with practically the same symptoms, together with a pain over the lower right lumbar region and an extremely hypersensitive area over the right iliac crest. Nine months later a tender swollen mass was detected in the right lumbar region extending from the right mid-axillary line to the spine, and a deep-seated abscess in

the lumbar muscles and under the iliac crest was opened, the discharge from which contained Gram-negative intercellular diplococci. Two months later an *x*-ray examination of the spine and pelvis was negative. The abscess recurred three times during the following nine months and for the next three years the patient was in poor health, and stated that the mass over the right hip frequently became prominent and subsided without treatment. On palpation slight pressure would cause it to disappear, only to return immediately on release and especially on coughing or straining. On *x*-ray examination with an opaque meal the ascending colon and caecum were found to extend through the lumbar muscles posteriorly into a large hernial sac, which was found at operation covered by a flap of fascia which had been eroded through by the old abscess. The sac was dissected down to the hernial opening over the right iliac crest, where the remains of an old perforated retrocaecal appendix were found, at the tip of which was a walled-off abscess the size of a walnut. The hernial opening was closed and the patient made an uneventful recovery.

564. Restoration of Ruptured Anterior Crucial Ligament.

G. PERTHES (*Zentralbl. f. Chir.*, April 3rd, 1926, p. 866) describes the various methods that have been employed for the repair of the anterior crucial ligament. In the period 1913–25 there have been 8 cases of rupture of the crucial ligaments admitted to the Tübingen Klinik; all were verified by operation. In 6 of these cases the anterior crucial ligament was involved; in 1 case the posterior ligament, and in 1 case both ligaments were ruptured. Perthes uses a vertical curved incision, commencing in the mid-line, 3 inches above the patella, carried outwards over the external femoral condyle, and then downwards and inwards to the tibial tuberosity; the quadriceps tendon, patella, and ligamentum patellae are all divided vertically. By this method the intercondylar fossa is fully exposed. The torn ends of the ligament are freshened and approximated by means of a thin aluminium-bronze wire passed transversely through the tibial portion of the ligament, and then through two canals bored through the external condyle at the site of the insertion of the anterior crucial ligament, the lower openings of these canals being 1 cm. apart. The two ends of the wire are drawn taut, thus approximating the freshened surfaces of the ruptured ligament, and are then twisted together over the outer surface of the external femoral condyle. The synovial sac is closed with catgut sutures and the two halves of the patella are approximated with tendon and silk sutures, the soft tissues are sutured in layers, and the joint immobilized in plaster splints for three weeks. Perthes has also performed Groves's operation—passing a strip of the ilio-tibial band through canals traversing the external condyle and the head of the tibia. The patient was a woman, aged 22; she had ruptured the right anterior crucial ligament four years previously. The operation was quite successful, but four months later she felt severe pains in her right knee, and the abnormal mobility of the joint returned. Perthes believes that the recurrence was due to atrophy and partial absorption of the fascial strip.

565. The Diagnosis of Lipomata.

AUVRAY (*Bull. et Mém. Soc. Nat. de Chir.*, March 27th, 1926, p. 328), in describing a somewhat rare case of lipoma of the palm of the hand, emphasizes the difficulty of diagnosis from tuberculous teno-synovitis, a condition which is comparatively common. Fluctuating tumours also closely simulate lipomata in some situations and their diagnosis may be difficult. When a bag of ice is placed over a lipoma the tumour hardens under the effect of the cold; it is the only tumour which is so affected. In a case Auvray demonstrated, of a patient with a tumour in the thigh, all who examined it thought it was a lipoma. It did not harden after the application of cold, and an operation showed it to be a tuberculous abscess, thus confirming the test. The cooling brought about by the evaporation of ether over a lipoma produces a similar effect. This procedure, which is extremely simple and little known, is said to be a sure means of diagnosis when any uncertainty exists.

566. Periarterial Sympathectomy in Surgical Tuberculosis.

G. ICHOK (*Presse Méd.*, April 7th, 1926, p. 435) collates recent reports on the treatment of tuberculosis of the bones and joints by periarterial sympathectomy, which causes dilatation of the vessels and a local hyperaemia as in the Bier treatment. Favourable reports have been reported by Gundermann, Läwen, and Cotte, but Peitri and Sebestyén have not obtained any benefit by treating the nerves. Ichok thinks that the reports published so far indicate that the method has been useful in some cases and is worth further trial.

Therapeutics.

567. Treatment of Pelvic Inflammation.

J. A. MCGLINN (*Therapeutic Gazette*, April 15th, 1926, p. 229) condemns all major surgical operations during the acute stage of pelvic inflammation, especially salpingectomy and the ligaturing of veins in infective thrombo-phlebitis. Diagnosis should, he states, be made on clinical evidence since it is dangerous to await a positive blood culture report. He advocates serotherapy, chemotherapy, and general treatment. He uses large intravenous doses of polyvalent antistreptococcus serum since small doses given intramuscularly or subcutaneously are useless. In two cases the intravenous injection of mercurochrome was so effective that McGlinn employs it in all severe cases. Nephritis, severe stomatitis, and other toxic sequels have been encountered, but without fatal results. He has never found benefit result unless there was a severe reaction following the intravenous injection of any germicide. He considers that general tonic treatment is the most valuable aid to recovery—sunlight and pure air, morphine to secure rest, and alcohol when indicated. When anaemia is severe small and repeated blood transfusions are often useful, but may cause "protein shock reactions." Localized pelvic inflammation requires rest in bed and purely expectant treatment for the relief of pain and anaemia. The author cites numerous cases indicating that inflammatory exudates and adhesions often disappear completely. He strongly recommends non-specific protein treatment and uses pasteurized or, preferably, boiled milk. In the case of outpatients he uses one of the sterilized milk or casein products supplied in ampoules. These were found to produce milder reactions than did pasteurized or boiled milk. The severity of the reaction, however, appears rather beneficial than otherwise; it occurs from three to six hours after injection, and there may be a severe rigor followed by a temperature of 104° or even 106°, but this falls quickly with profuse sweating. Daily blood counts may show also a definite leucocytosis, persisting for several days; there is sudden relief from pain and a sense of well-being, and consequently the patients submit willingly to a repetition of the injection. He finds that previous protein tests are unnecessary and that anaphylaxis does not occur. The first injection was usually 5 c.cm., the next, given in five or seven days, was 10 c.cm. The number given depended on the extent and chronicity of the lesions; the maximum number was usually six injections. In cervical gonorrhoea there was usually a local reaction in the form of a profuse gonococcal discharge after the injections. The author now uses this treatment in all cases before resorting to surgery except for the evacuation and drainage of localized abscesses.

568. Vaccine Treatment of Chronic Gonorrhoea.

F. WOLFF (*Zentralbl. f. Gynäk.*, April 17th, 1926, p. 1069) publishes conclusions derived from treating resistant cases of chronic gonorrhoea by administration of (1) stock vaccines, (2) freshly prepared but not necessarily autogenous vaccines, and (3) living vaccines. He finds that stock vaccines supplied by manufacturing chemists are to a certain extent useful as an adjuvant to local treatment, are helpful in cases of adnexal inflammation, and may serve by provocation to make a latent gonorrhoea manifest; nevertheless they are not therapeutically effective in the absence of local treatment. Freshly prepared vaccines were found superior to all stock preparations. The author states that they should be prepared from a clinically virulent case of acute gonorrhoea or an acute complication (such as prostatitis or epididymitis) in an old-standing case, and should be given in high doses of from 500 million upwards twice a week. They speedily lose their efficacy with keeping and should be discarded after a few weeks. Focal and general reactions are said to occur much less frequently after injections of fresh than of stock vaccines, possibly because the latter are apt to contain liberated endotoxin. In cases in which acute and subacute symptoms and signs have subsided and in which after two or three months there is no tendency towards cure, Wolff has had excellent results from the subcutaneous injection of living gonococci, preferably derived from another patient, on one or if necessary two occasions. A culture not more than one week old from a virulent strain is used; three or four injections at a time of 0.1 to 0.2 c.cm. of a well shaken emulsion of a culture in 2 c.cm. of distilled water being given, the sites of infection being about 6 cm. apart. A painful phlegmon develops and sometimes an abscess; the second injection must not be given until these have almost subsided. No metastatic abscesses have been noted, nor signs of arthritis or endocarditis. This vaccine treatment alone sufficed in many cases to cure chronic uterine gonorrhoea; it did not appear to affect gonorrhoea of the mucous membranes such as urethritis, in which cases local treatment was also required.

569. Insulin in Diabetic Tuberculosis.

V. CORDIER and P. SÉDALLIAN (*Journ. de Méd. de Lyon*, April 20th, 1926, p. 205) state that there is still much divergence of opinion as to whether insulin should be employed in cases of diabetes complicated by tuberculosis. Some authorities assert that the administration of insulin lights up a quiescent tuberculous focus in a diabetic. Others, while agreeing that insulin has no directly beneficial effect on the tuberculosis, claim that the abolition of acidosis and the rapid improvement in the patient's nutrition which usually follows insulin treatment must increase the patient's power of resistance. The present authors, though agreeing that the number of recorded cases is too small to justify a dogmatic statement, consider that, in view of the uniformly fatal result in cases of post-diabetic tuberculosis, insulin should be given a more extensive and prolonged trial. Fibrous and progressive disease, however, constitutes an absolute contraindication. They give details of four cases in which the treatment proved beneficial, though death was not prevented.

570. Treatment of Gastric Dyspepsia.

F. L. APPERLY (*Med. Journ. of Australia*, March 27th, 1926, p. 354) has been investigating the conditions which interfere with the passage of food from the stomach into the intestine, and finds that before the intestine will accept chyme a certain salt concentration or osmotic value must have been reached. Any value above or below this causes rejection by the intestine of the food back into the stomach, where it remains until concentration is correct. The chyme should be about isotonic with sodium chloride in the blood. The administration of hydrochloric acid, sodium bicarbonate, or sodium chloride was found to have the effect of raising the salt strength of the food more rapidly to the required value, with the result that regurgitation of duodenal fluid was diminished, acidity was raised, and the stomach emptied more rapidly. The author believes that this explains why the use of sodium bicarbonate is valuable in some cases of achlorhydria with dyspepsia, and is followed by relief of pain and discomfort, while in others no benefit is obtained. The usual dose of sodium bicarbonate is from 15 grains to 1 ounce, given in about one ounce of fluid. In other cases hydrochloric acid was found more useful.

Radiology.

571. Radiological Diagnosis of Pulmonary Tuberculosis.

R. T. MONROE and E. S. EMERY, JUN. (*Boston Med. and Surg. Journ.*, April, 1926, p. 619) suggest that patients with vague symptoms of malaise, tendency to fatigue, and other possible indications of pulmonary tuberculosis may have the presence or absence of this disease definitely established by *x*-ray photographs, and that the inconvenience and expense of examining a large number of suspects fruitlessly may be avoided by a careful study of the symptoms rather than of the physical signs. The symptoms, signs, and *x*-ray findings of 107 patients were tabulated and examined statistically, and a comparison was made with another series of 500 patients of whom similar details were available. Considerable discrepancies between the physical signs and the *x*-ray picture were manifest in several cases; thus cavities were found present by *x* rays in patients in whom the physical signs did not suggest their presence, and vice versa. In the 107 cases faulty diagnosis in 21 was attributable to the physical signs. Monroe and Emery therefore advise routine *x*-ray examination of the chest whenever the symptoms point to tuberculosis, irrespective of the indications afforded by the physical signs. Frequent examinations of the sputum, pulse, and temperature should not, however, be neglected, since a negative *x*-ray examination does not necessarily exclude tuberculosis. The authors mention that seven cases with negative *x*-ray findings had tubercle bacilli in the sputum.

572. X-Ray Treatment of Laryngeal Tuberculosis.

J. J. DEBICKI (*Journ. de Radiol. et d'Electrol.*, March, 1926, p. 120) reports most encouraging results following the *x*-ray treatment of laryngeal tuberculosis. He quotes a number of authors who have obtained similar results, particularly during the last five years; they all emphasize the anaesthetic effect of the treatment. Since 1921 Debicki has treated 33 patients with laryngeal tuberculosis, of whom 26 were completely cured. He employs a spark of 0.27 cm. and the filter is made of 4 mm. aluminium and 5 mm. cardboard or wood; the anticathode is placed at a distance of 0.23 cm. from the skin. The larynx is irradiated every week, alternately on either side. The treatment is repeated after an interval of four to six weeks according to the progress of the disease. The author does not agree with those who consider that destructive lesions contraindicate *x*-ray treatment. Three of his patients were 52 to 62 years of age. Two patients were completely cured after treatment lasting for more than a year; in the other case a recurrence occurred after six months. The author states that while the most favourable results are obtained in early cases, serious destructive forms may be equally treated with success. The optimum dose is 5 Holzknecht units applied every week to each side alternately, and repeated after an interval of four to six weeks between each course. Apparent aggravations occurring during the course of treatment are not held to contraindicate its continuance. The treatment should be continued for some time after the disappearance of all symptoms.

573. X-Ray Treatment of Enlarged Prostate.

C. GUILBERT and R. D. GAVILLARD (*Urol. and Cut. Rev.*, March, 1926, p. 150) record their experience of *x*-ray treatment of 45 cases of enlargement of the prostate during the last four years. The results were as follows: 34 were cured by one treatment and 6 by two treatments. In 1 patient who refused a second treatment no good effect was obtained, 3 were subsequently operated on, and 1 showed a relapse during treatment. On conclusion of the treatment some patients developed bladder trouble owing to infection or deficiency of the bladder muscles, but these symptoms were independent of *x*-ray treatment. The authors maintain that irradiation of the prostate is a very mild procedure which does not exert any dangerous influence on the organ or interfere with surgical measures if these are required subsequently. It is important that irradiation should be instituted as early as possible, as a commencing hypertrophy is less sclerotic and more sensitive to *x* rays and the vesical troubles are transitory and more curable. In order to avoid relapses the portal and general tension should be lowered in plethoric cases, and in infected cases the infection should be cured by vesical irrigation and vaccines.

574. Vesical Lesions Produced by Sodium Bromide Solutions.

ACCORDING to B. OTTOW (*Zentralbl. f. Gynäk.*, May 1st, 1926, p. 1199) a 25 per cent. sodium bromide solution has now replaced collargol as a "contrast medium" in cysto-radiography, as it gives better images; but several writers have reported the occurrence of haematuria and of renal and vesical lesions following its employment. The author describes two cases of severe cystitis following intravesical injection of 200 c.cm. of a 25 per cent. solution of sodium bromide. The first patient, aged 41, had uterine myomata. Immediately after cysto-radiography she had dysuria and scanty urine, which persisted for four days. The vesical mucosa was partially detached and the trigone was deeply congested and of a dull blood-red colour. In the second case the bladder was anaesthetized with 50 c.cm. of a 2 per cent. alypin solution prior to the injection of 250 c.cm. of sodium bromide solution, which was followed by a sensation of burning and pressure. Two days later the patient had similar symptoms to the former. Cystoscopic examination two days later showed much damage to the vesical mucosa, ulceration, and bullous oedema. The author recommends that immediately after the skiagraphy the bladder should be emptied and it should then be irrigated with boric lotion. Since this procedure has been adopted he has not seen any similar injuries to the bladder wall.

Obstetrics and Gynaecology.

575. Persistent Occipito-posterior Presentations.

F. B. CRAIG (*Med. Journ. of Australia*, March 27th, 1926, p. 352) discusses the diagnosis and management of persistent occipito-posterior presentation. By abdominal palpation a correct diagnosis of the position of the foetus should be made after the thirty-sixth week, in time to correct malpositions. In occipito-posterior positions the breech occupies the fundus and foetal limbs can be palpated in the front of the uterus about the umbilicus. In the right occipito-posterior position the sinciput is easily felt above the pelvic brim, near the left ilio-pectineal eminence, and usually at a higher level than the occiput, which lies more deeply in the right side of the pelvis. In the left occipito-posterior position the sinciput is to the right in front and the occiput deeply placed to the left. By palpating these two points of the head it can be ascertained whether the head is movable or fixed in the brim. The foetal heart sounds are usually heard at their maximum above and lateral to the anterior shoulder, though a loud uterine souffle may interfere with their clearness. When the foetal spine has become slightly extended over the convexity

of the lower lumbar and upper sacral vertebrae of the mother, the foetal chest comes to lie close to the surface in the hypogastrium; the sounds will then be heard distinctly also near the middle line or even across it in the opposite iliac fossa, which may lead to a wrong diagnosis. During labour the foetal parts may be recognized between the palus, and the progress of the head estimated. When posterior positions are recognized before labour has started the head can be rotated into an anterior position by Buist's method. After the onset of labour it is unnecessary to interfere if the head is lying in the oblique diameter and is descending, provided that the condition of the mother and foetus is good. The mother should lie on the side to which the occiput points so that the breech may be dragged further over to the same side, the foetal spine being thus straightened, the occiput forced down, and its rotation to the front encouraged. Craig mentions four ways of dealing with arrested descent or backward rotation of the occiput. In multiparae manual flexion may be tried by pushing up the sinciput during a pain, but is seldom effective. When dilatation is complete the head may be rotated by the whole hand in the vagina after being pushed up to disengage it slightly. For this the patient is anaesthetized, placed in the left lateral position, and the right knee supported. In multiparae this may be all that is required when the pains are strong, but in most cases it is recommended that forceps be applied as soon as the head is in the correct position. A third method is rotation by forceps, with the minimum of force, the tissues being handled very gently. The fourth method, craniotomy, is usually only necessary when the outlet of the pelvis is contracted. Such a degree of deformity should, however, have been detected by an ante-natal examination and preparations made for Cæsarean section.

573. Treatment of Repeated Abortion.

J. NOVAK (*Zentralbl. f. Gynäk.*, April 10th, 1926, p. 1003) records two cases in which healthy women, having (like their husbands) negative Wassermann reactions, had had five or six pregnancies in succession terminated by spontaneous abortion in the early months. In the ensuing pregnancy they were given small doses, about 20 drops, of a 0.05 per cent. potassium iodide solution daily, together with three Blaud's pills. Healthy infants were born at term, as was the case also in two other patients who received similar treatment; one of these had previously given birth to a macerated foetus in the seventh month, and the other had suffered from recurrent pregnancy nephropathy with death of the foetus. In these patients also the Wassermann test was negative. The treatment was originally thought to be effective by reason of its action against a latent syphilis; Novak, however, regards it as probably affecting the endocrine glands, especially the thyroid.

577. Fibroma of the Cervix.

J. VANVERTS (*Bull. Soc. d'Obstét. et de Gynécol. de Paris*, April, 1926, p. 242) reports a case of the rare condition of fibroma of the cervix, the only one he has encountered in the course of practice during thirty years. The fibroma was as large as a small mandarin orange and had developed in the anterior wall of the cervix. It was sessile, and on section presented the characteristic structure. The body of the uterus contained a small interstitial fibroma in the posterior wall. The patient, aged 47, had had three confinements, the last three years previously. For some months the periods, which had been normal, increased until there was an almost continual loss of blood; considerable pain and tenderness followed. Abdominal hysterectomy was performed without difficulty, and the only other abnormal conditions found were that both abdominal openings of the Fallopian tubes were closed, their walls were thickened, and both ovaries contained numerous small cysts, of which some were haemorrhagic.

Pathology.

578. The Spirochaete of Tuberculous Haemoptysis.

F. BEZANÇON and E. ETCHEGOIN (*C. R. Soc. de Biologie*, April 30th, 1926, p. 1056) have been studying the spirochaete that was first described in 1923 by Etchegoin, who found it in the sputum of tuberculous patients suffering from haemoptysis. Attempts to cultivate it have at last been successful, though its isolation in pure culture has not yet been accomplished. The medium used consists of a mixture of horse serum, saline solution, and peptone water, covered with sterile oil, and heated for half an hour on three successive days at 56°C. Growth occurs best at 37°C., slightly at 29°C., and not at all at room temperature. The spirochaete is described as being a filamentous organism with four to nine fairly sharp but irregular curves; the length of each individual spiral is 2.5 to 3μ, and the length of the whole filament about 7 to 13μ. The movements of the organism are very regular but not lively.

579. Immunization by Tetanus Bacilli in the Digestive Tract.

C. TENBROECK and J. H. BAUER (*Journ. Exper. Med.*, March, 1926, p. 361) find that tetanus spores are present in the stools of about one-third of the population of Peking; the disease, however, is relatively rare. The blood of these carriers was found to contain an appreciable amount of antitoxin, and it was assumed that it was this antitoxin that was responsible for immunity. To test this guinea-pigs were inoculated with about 1,000 spores in the muscles of the hind leg. The animals showed symptoms of the disease in four or five days, and succumbed on the seventh to the tenth day. Guinea-pigs without tetanus bacilli in the faeces were fed with old broth cultures; some were given Type 1, others Type 3, and others Type 5 bacilli; specific agglutinins appeared in the blood serum, and later an antitoxin was detached. After six months the amount of antitoxin was equivalent to 0.05 U.S.A. unit per c.cm. These animals were then injected with tetanus spores of different types. The results were unexpected. It is known that agglutinins are specific for each serological type of bacillus, but that the antitoxin is common to all types. It was assumed, therefore, that guinea-pigs with antitoxin in the serum would be resistant to all types of bacilli, but it was found that they resisted only that type with which they had been fed. Thus, a guinea-pig with a considerable quantity of antitoxin was still susceptible to infection with tetanus spores of a type different from the ones used for immunization. When animals were fed with several types they became immune to these types. But though guinea-pigs which were carrying tetanus bacilli in the alimentary tract contained antitoxin in their serum, and were resistant to the injection of tetanus spores, they succumbed to the injection of tetanus toxin. Since there is apparently no relation between the amount of antitoxin in the blood and immunity to tetanus, the authors conclude that acquired immunity must be due to some other type-specific bodies which are elaborated.

580. The Cuti-Reaction and Vaccination.

L. RICCIARDI (*La Pediatria*, April 15th, 1926, p. 421) found that among 50 children whose cuti-reaction to tuberculin was intensely positive before vaccination the second reaction performed shortly after vaccination showed in 18 cases a distinct attenuation and in 3 cases was entirely absent. A third cuti-reaction performed a month later showed a return of the cuti-reaction to its original intensity. Ricciardi considers that this diminution or absence of reaction in vaccinated children is an indication that greater caution is required in performing vaccination on subjects who are living under unfavourable organic conditions or who are likely to be suffering from tuberculous infection, owing to the susceptibility of recently vaccinated children to tuberculous infection.

581. The Significance of Reticulation in the Red Corpuscles.

W. DAMESHEK (*Boston Med. and Surg. Journ.*, April 29th, 1926, p. 759) has made a careful examination during the last five years of the appearance of reticulated red corpuscles in the blood, using brilliant cresyl blue for his stain. One drop of 0.3 per cent. solution of the stain is placed at one end of a slide and allowed to dry; a drop of blood on a cover-slip is inverted on to the dye and the two allowed to mix for three or four minutes. Dameshek believes that the number of reticulated cells present indicates the degree of bone-marrow activity, and states that before and at the beginning of any remission or permanent rise in the red cell count the reticulated count exceeds 6 per cent. As the culmination of the rise is reached the count gradually falls again to the normal, which is 0.5 to 1 per cent. With bone-marrow aplasia the reticulated count was extremely low. He uses this count as a guide to prognosis in pernicious anaemia and believes that an elevation of the count up to 5 per cent. represents probably a process of regeneration coexisting with a greater extent of destruction, while a sudden rise in the count to above 6 per cent. foretells a coming remission. Continued low counts are said to be of very grave prognosis. The author considers that the relapse in pernicious anaemia is closely related to aplastic anaemia, which, with its evident bone-marrow failure, has an almost total absence of reticulated corpuscles. In purpura haemorrhagica the count increased before recovery and remained low when death from haemorrhage was pending. Dameshek adds that the marked reticulation in congenital haemolytic anaemia is of pathognomonic importance, distinguishing it from all other anaemias with large spleens.

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

582. Ventricular Bradyrhythmia due to Septal Necrosis.

E. GERAUDEL, R. BÉNARD, and P. HILLEMAND (*Arch. des Mal. du Cœur, des Vaisseaux et du Sang*, May, 1926, p. 281) describe a case of ventricular bradycardia and sudden death, which were not due to a lesion of the bundle of His, in a man, aged 67, who had oedema of the ankles, commencing orthopnoea, and cardiac asthma. The heart was dilated and there were general symptoms of cardiac failure—anasarca, ascites, pleuritic effusion, and albuminuria. The pulse varied from 36 to 24 a minute. After a transient improvement the patient died suddenly about three months after admission. Serial sections of the left ventricular wall showed an area of necrosis caused by endarteritis, blocking the branch of the right coronary artery which supplies the auriculo-ventricular node of Tawara and the bundle of His. The main trunk of the bundle of His was not involved, nor was the main trunk of the coronary artery, but this circulatory failure in the branch was the cause of the permanent ventricular bradyrhythmia. There was a second necrotic area in the fibrous interventricular septum. The authors conclude that bradyrhythmia, which is an important element in the Stokes-Adams syndrome, is due to a deficient blood supply in this artery; hitherto the Stokes-Adams syndrome has been regarded as being due to a destructive lesion of the bundle of His, such as a gumma or neoplasm of the interventricular septum.

583. Syphilitic Reinfection in Tabes.

POIRIER (*Bruxelles-Méd.*, April 4th, 1926, p. 665) reports a case of syphilitic reinfection of a tabetic patient. A man, aged 44, had had a chancre in 1908, and in 1916 complained of visual troubles, which proved to be due to optic atrophy. His Wassermann reaction was positive and he was treated with mercury intramuscularly; three years later the reaction was negative. In 1926, two weeks after coitus, a small ulcer appeared on the corona in the centre of a zone of cartilaginous hardness; the inguinal glands were enlarged. Poirier concluded that the lesion was a primary sore, and the first of a course of quinine iodobismuthate injections produced a typical roseola. The Wassermann reaction was found to be strongly positive. The patient had an old-standing tabetic optic atrophy; the pupillary light reaction was slow and feeble, and the accommodation reflex normal. The patient had been taking vespéral and adalin frequently, which may have affected the pupil reaction; the deep reflexes were present. Poirier suggests that this patient's first infection was due to the neurotropic type of syphilitic virus, and the second to the dermotropic type, if such exist. Bismuth was used owing to its almost selective effect on neuro-syphilis, arsenical compounds being avoided on account of their effect on the optic nerve.

584. Bilateral Popliteal Aneurysms.

A. W. HOYT (*Scientific Therapy and Practical Research*, February, 1926) reports a case of a man, aged 56, in whom fusiform popliteal aneurysms were found in both legs in the spring of 1922. Four Wassermann tests were negative and intensive specific medication was given without effect on the pain or the aneurysms. In December each aneurysm was 3½ inches long, and symptoms of intermittent claudication were very pronounced. Injections of 3 c.cm. of a 1 in 1,000,000 solution of the patient's whole blood in distilled water were given weekly. Four days after the first intravenous injection all symptoms of intermittent claudication had completely disappeared in both legs. A month later there was total absence of pulsation in the right popliteal aneurysm, and the right foot was warm, a satisfactory collateral circulation having been established on the day when the symptoms disappeared. Five months later the patient could walk without pain, but the right popliteal artery was pulseless and the left was pulsating strongly. Ten months subsequently the patient reported that he had been able to engage in strenuous exercise, including dancing, but he had recently had some pain over the left sciatic nerve, which suggested the existence of a deep thrombus. The skin over the first three toes of the left foot became yellow and dry gangrene subsequently occurred with severe pain. The gangrenous areas separated, leaving a healed surface. Six months later acute pain recurred in the left leg and foot, which were pulseless, and an area over the left patella became dusky. Dry gangrene appeared above the left big toe, which separated from the foot, leaving a healed area. Three months later all pulsation in the left aneurysm had ceased, weekly intravenous injections of 2 to 4 c.cm. of the solution of blood in distilled water having been given during the attacks, and at three and four week intervals subsequently. In addition to these injections electric heat was used, a partial antidiabetic diet given, and the leg kept horizontal during the establishment of the collateral circulation, which was hastened by frequent massage. Complete recovery followed. Hoyt discusses the assumption of spontaneous cure in this case, as against the possibility that some undetermined part of the treatment was responsible for the favourable result. He draws attention to the age of the patient as an argument against the cure being spontaneous.

585. Aneurysm of the Heart.

H. NISHIDA (*Journ. of Oriental Medicine*, March, 1926, p. 60) suggests that aneurysm of the heart is not so rare as has been supposed; in the majority of cases clinical diagnosis is impossible. He has found records of about 120 cases observed since 1890 in Europe and America; only 4 cases have been recorded in Japan. He now reports the case of a woman, aged 58, who had had for ten months oedema of the face and legs, cough, dyspnoea, and slight pain in the chest. She was anaemic, the pulse was rapid but regular, the blood pressure was 100 to 160 mm., the Wassermann reaction was negative, and there was general anasarca. No obvious dilatation of the heart was present, but there was an apical systolic bruit and the second aortic sound was accentuated. Rhonchi were heard at both bases. The liver was somewhat enlarged and ascites was present. The urine contained albumin, indican, hyaline casts, and leucocytes. Three months later her appetite failed, her condition became worse, and she died a month later. The heart was generally dilated but the valves were normal; there was advanced atheroma of the aorta and of the coronary arteries. In the left ventricle, behind the mitral wall, there was a thin-walled aneurysm as large as a walnut. Nishida thinks that the aneurysm was caused by the interference with the nutrition of the wall of the left ventricle, due to the advanced atheroma of the coronary artery.

Surgery.

586. Cancer of the Skin.

J. J. MORTON (*Arch. of Surg.*, March, 1926, p. 653) finds that squamous-cell cancer of the skin occurs usually in patients aged 45 to 70. It is more common in men, since lip cancer is usually found in males, and there is the greater frequency of exposure to hazardous occupations. Anything that causes repeated injuries, such as a ragged tooth, may cause cancer, while it may arise in any of the common dermatoses. It may develop in scars and ulcers, while the various types of occupational cancer are due to chemical substances which set up irritation, as in tar and paraffin workers. An interesting group of this variety occurs in mule-spinners, due to irritation of the scrotum by mineral oil. The disease is seen in the face, trunk, and scrotum usually. The special danger of squamous cancer is its early metastasis. Treatment is by surgery or radiation; the primary growth should be removed, and also the dangerous secondary foci. Radium tubes may also be implanted after operation. Growths on the scalp and forehead do not usually require removal of the glands. A number of cases are reported, with illustrations of the growths.

587. The Acute Post-operative Toxaemia of Hyperthyroidism.

J. ROGERS (*Surg., Gynecol. and Obstet.*, April, 1926, p. 567) discusses the treatment of the acute post-operative toxaemia of hyperthyroidism, than which there are few more dangerous conditions. In his experience it occurs most commonly in patients with marked exophthalmos, especially those who have previously had a pallid or pigmented skin, or who show a perceptible muscular atrophy in the hands and forearms; it is more prone to occur in those with firm rather than soft thyroids. In such cases the danger apparently arises rather from an absence of thyroid secretion than from an excess, and consequently Rogers advises the subcutaneous administration of a boiled aqueous extract of the thyroid, known as

"thyroid residue," in 20 to 30 minim doses every two hours, in the event of alarming symptoms arising during or immediately after operation. This appears to act by stimulating the terminal filaments of the vagus or parasympathetic portion of the involuntary nervous system, and therefore it does not increase the already alarmingly rapid cardiac action; while it intensifies the symptoms if administered to patients under medical treatment for severe hyperthyroidism, it appears to be beneficial in acute post-operative toxaemia. Notes of three cases are given in which its free administration averted a fatality or saved the patient from a very dangerous condition.

588. Treatment of Peritonsillar Abscess.

O. MAYER (*Wien. klin. Woch.*, April 29th, 1926, p. 508) describes two forms of peritonsillar abscess. The first points at the upper pole, and is most conveniently opened at Chiari's site by a horizontal incision from the mid-line at the base of the uvula; this incision should measure 2 cm. in length and depth; it extends towards the last upper molar. The tissues are much thickened, and care is necessary to avoid cutting the tonsillar artery or its branches. In such a case of damage to the tonsillar artery plugging with iodoform gauze failed to arrest haemorrhage; Mayer performed an immediate enucleation and the bleeding ceased. This procedure causes collapse of the capsule with retraction of the wounded artery. The second form—namely, abscesses behind the lower half of the tonsil—may be recognized by the greater severity of the symptoms: dysphagia, tenesmus, persistent earache, and high fever. There is some paresis of the mandibular muscles and much swelling of the submaxillary and retromandibular glands. When the incision is made as described previously no pus appears. Mayer recommends enucleation under light ether anaesthesia, with the patient in a sitting position. If the abscess be not evacuated by enucleation at the right moment there is danger of the pus travelling downwards in the carotid sheath; it may even reach the mediastinum or cause erosion of the carotid. The abscess should be opened by an incision along the anterior border of the sterno-mastoid. Free haemorrhage from the tonsillar capsule or from the incision may be arrested by compression of the carotid or of the tonsillar bed. If the carotid be eroded, ligature of the common carotid trunk may be necessary.

589. Chronic Non-specific Synovitis of the Knee-Joint.

A. LÄWEN (*Zentralbl. f. Chir.*, April 3rd, 1926, p. 857), in 39 arthrotomies of the knee-joint, has often found that chronic synovitis resulted in fissural degeneration of the patellar hyaline cartilage and of the semilunar cartilages. He compares the inflammatory changes in the synovial membrane with those found in chronic peritonitis, and believes that many cases of dislocation of the semilunar cartilages, and of osteo-arthritis, originate from chronic arthritis. He therefore recommends that an exploratory arthrotomy should be made by a large anterior incision, preferably Payr's "S" incision. If the synovial membrane is thickened and adherent to the intercondylar fossa, or other bony surfaces, he excises redundant synovial masses and restores the normal outline of the synovial membrane by suturing the cut edges with fine catgut. He operates under strict haemostasis; the tourniquet is removed after the suture of the cut edges of the synovial membrane, when a careful search for any bleeding points is made. He has excised the plica synovialis patellaris in nineteen cases.

590. Typhoid Abscess of the Breast.

P. O. SNOKE and J. L. GOFORTH (*Amer. Journ. Med. Sci.*, April, 1926, p. 555), who record a personal case, illustrate the rarity of typhoid abscess of the breast by the following statistics. Only four instances occurred among 1,626 cases of typhoid fever reported by Berg in 1895. Curschmann saw only two cases, one of which occurred in a male. Five cases were seen by Leudet in the course of twenty-five years. Madelung in 1917 found records of thirty cases, in only seven of which a bacteriological examination had been made. In three a pure culture of *B. typhosus* was found, in two others *Staphylococcus albus*, and in the other two no typhoid bacilli were present. The present case occurred in a negress, aged 18, who developed three post-lactation masses which probably represented periductal inflammation and may have afforded foci for the localization of typhoid bacilli. Subsequently a swelling developed in the right breast. No definite diagnosis could be made, and the breast was amputated. A large thick-walled abscess was found on section containing orange-coloured purulent material from which typhoid bacilli were grown. There was no evidence of glandular proliferation, tuberculosis, or syphilis. Histologically the picture was that of a chronic suppurative inflammatory process with abscess formation. Enlarged glands in the axillary fold proved to be periductal adenofibromata, presumably of misplaced mammary tissue.

Therapeutics.

591. Insulin Treatment in Non-diabetics.

R. FEISSLY (*Presse Méd.*, February 13th, 1926, p. 196) has treated six patients with non-diabetic malnutrition and debility, previously resistant to remedial measures, by injections of insulin. He gave them two or three injections a day half an hour before meals rich in carbohydrates, commencing with 5 units of insulin at each injection and increasing as rapidly as possible to 60 units a day. He maintained this treatment for three to four weeks. He found that the weight curve rose very steeply with the commencement of treatment, there being an increase of nearly 9 lb. in two cases in three and four weeks respectively. The appetite improved markedly even in those who had suffered from anorexia previously, and the patients required food at night as well as during the day. He stresses the point that the carbohydrate ration should be much in excess of the amount theoretically sufficient to neutralize the insulin; if the carbohydrate was restricted to a theoretical sufficiency the classic phenomena of hypoglycaemia appeared—namely, trembling, sweating, weeping, and nervousness.

592. Harmlessness of Toxin-Antitoxin Injections.

W. H. PARK (*New York State Journ. Med.*, April 15th, 1926, p. 347) states that probably over two million injections of toxin-antitoxin have been given in New York State alone, and no disaster has occurred. Only three serious accidents, to his knowledge, have ever followed the use of toxin-antitoxin. The first happened many years ago in Dallas, Texas, where, owing to a mistake, a toxic preparation was used. As the result of this occurrence the biological manufacturing plants, at the suggestion of the Hygienic Laboratory, adopted rules which must prevent this accident ever occurring again. The second was an accident which occurred near Vienna in 1924 (JOURNAL, October 24th, 1925, p. 757) and was at first attributed to changes in the toxin-antitoxin. According to recent information, however, the fatalities were due to the fact that through a mistake diluted toxin was used instead of toxin-antitoxin. The third accident (JOURNAL, March 8th, 1924, p. 454), which had no fatal results, occurred from the use of toxin-antitoxin immediately after thawing the frozen product. The new standardized preparation of toxin-antitoxin used in the United States contains only one-thirtieth of the amount of toxin used in the first preparation and is said to be absolutely harmless when used after freezing and thawing.

593. Intravenous Chemotherapy in Gonorrhoea.

H. JAUSION and M. VAUCEL (*Presse méd.*, February 13th, 1926, p. 193) report the successful treatment of gonorrhoea by chlorhydrate of diamino-methyl-acridine. Intravenous injections of 5 c.cm. of a 1 in 50 watery solution of this dye were given three times a week until a cure was obtained. In some cases there appeared a yellow coloration of the skin and a subinflammatory puffiness, which disappeared in ten to fifteen days. The shock of the injection was negligible in most cases; a few susceptible individuals showed slight syncope after the first injection, but subsequent treatment was always well borne. Ordinarily fifteen to eighteen seconds after the injection the patient experienced a burning sensation, constriction of the throat, congestion of the face, and warmth in the perineum; this reaction only lasted five to ten seconds, but there was sometimes a local urticaria at the site of injection. In a few cases towards the fifteenth day a cumulative toxic effect was noticed—slight nausea, cardiac irritability, and colouring of the skin. The dye is fluorescent, and exposure of a patient to strong sunlight soon after injection caused in forty-eight hours an erythema of the exposed area, and sometimes even a papular eruption on the covered parts. This photo-sensitiveness is said to be most marked during May and June, and may be prevented by the administration of 0.25 gram of resorcin. Elimination is by the urine, 10 cg. requiring forty-eight hours; but there is little practical risk of cumulative effect with injections every other day, as 60 per cent. of the dose is eliminated in the first two hours. Of the 165 cases treated there was apparent cure, judged by both clinical and laboratory tests, in 153. The smallest number of injections necessary was five (in 22 cases), and the most twenty-five to forty (in 8 cases). One patient, however, required fifty-four injections for the cure of a metatarsalgia that had resisted all other forms of treatment. The only gonorrhoeal complication that arose after treatment had been established was iritis, which was cured in less than a week by further injections, together with the local instillation of atropine. The authors add that the advantages of this method of treatment are that it is ambulatory, no irrigations are necessary, there are no complications except the possibility of iritis, the effect on the general health is excellent, and there is better disinfection of the genito-urinary system.

especially in the female, than by any other method. They believe that the best results will eventually be obtained by the combination of a suitable mordant with the dye. The mordant with which they have been most successful up to the present is chrome alum, which they combine with methylacridine so as to get a 1 in 50 solution of the two products.

594. Iodized Oil in Bronchial Affections.

S. PRITCHARD, B. WHYTE, and J. K. M. GORDON (*Journ. Amer. Med. Assoc.*, April 10th, 1926, p. 1119) report upon the use of iodized oil in the diagnosis and treatment of bronchial affections. They used 40 per cent. metallic iodine with oil of poppy seeds so closely combined that no free iodine was present; the high iodine content rendered it opaque to *x* rays. By injecting the oil into the bronchi small bronchiectatic dilatations and enlargements were capable of detection radiographically. Three methods of introducing the oil were used: (1) supraglottic, in which 20 c.cm. of warmed oil was slowly syringed into the larynx under observation with a laryngeal mirror, the pharynx and the base of the tongue having been previously swabbed with a 10 per cent. cocaine solution; (2) transglottic, in which the tip of the cannula was passed through the glottis into the trachea; and (3) subglottic, in which the oil was injected directly into the trachea through a hollow curved needle passed through the crico-thyroid membrane after anaesthetizing the skin and subjacent tissues. The authors state that before injecting the oil 1 to 2 c.cm. of warmed 1 per cent. cocaine solution may be injected in order to anaesthetize the mucosa of the trachea and bronchi. The oil is directed into the right or left bronchus by inclining the patient to the desired side, and in order to fill the apical bronchi the patient must be placed on a tilting table with the affected side downwards, the distribution of the oil being determined by gravitation and the aspirating power of the lung. In over 600 injections no ill effects had to be recorded, and it was found that the supraglottic method was quite as satisfactory as the others, required less anaesthesia, and caused less anxiety to the patient. As a method of treatment this particular compound of iodized oil, by allowing the slow liberation of iodine, was found to be of very great value in chronic affections of the lower respiratory tract, but in acute affections or in pulmonary tuberculosis the authors hesitate to use it for either diagnostic or therapeutic purposes. The technique is not difficult, but it is added that negative results afford no diagnostic proof that bronchiectatic dilatations do not exist.

Dermatology.

595. Lichen Nitidus.

H. W. BARBER (*Brit. Journ. Derm. and Syph.*, April, 1926, p. 143) discusses the signs, histology, and treatment of lichen nitidus, and gives a brief historical survey of the literature of the disease. The essential lesion is a minute papule not larger than a pin's head, flat, globular, and slightly raised; it is formed by a granuloma just below the epidermis, which is thinned above it, giving it the characteristic glistening appearance. In many cases the eruption consists only of such papules, which remain discrete and unaccompanied by any changes in the surrounding skin, with a limited distribution on the penis, lower abdomen, groins, inner surfaces of the thighs, the bends of the wrists and forearms, and backs of the elbows. In some cases the eruption is more widespread and loses its primary papular appearance in certain regions, though on examination of the whole body areas will be found where the papules are discrete and typical of the simpler form of the disease. Such a diffuse eruption particularly involves the joint flexures, such as the antecubital and popliteal spaces, the extensor surfaces of the knees and elbows, the submammary region, the groins and thighs, while the palmar and dorsal surfaces of the hands and feet and the buccal mucous membrane may be affected. No tubercle bacilli have ever been demonstrated, and its cause is unknown; Barber regards it as a definite entity and not a tuberculide. Resorcin and salicylic acid externally, iodine internally, and fractional *x*-ray doses have all been followed by improvement; spontaneous disappearance has been recorded.

596. Pruritus.

G. THIBIERGE (*Journ. de Méd.*, April 10th, 1926, p. 229) discusses the clinical and therapeutic aspects of pruritus. The absence of pruritus in certain skin affections such as syphilis is of diagnostic importance. Pruritus may exist with or without cutaneous lesions, and it is always a question which is the causal agent, hence the importance of ascertaining which comes first. In cleanly people with long-continued pruritus, worse when in bed, it is essential to exclude scabies, for in such patients the skin lesions may be very slight. Possibly the itching in parasitic diseases may be due to a toxin, and so come into line with the numerous toxic causes, such as uraemia, biliary affections, and endocrine inefficiency. Certain drugs, such as morphine, cocaine, chloral, and antipyrin, may cause pruritus; as also various foods, effervescent sweet wines, coffee, and tea. People of nervous temperament are especially predisposed. Acute pruritus is generally of definite toxic origin, and is not so troublesome as the subacute and chronic types. The cocaine taker is often troubled with the feeling that some parasite is under his skin. Leukaemia sometimes induces troublesome pruritus, which can often be relieved by *x* rays. In the pruritus of the aged, often due to faulty urine elimination, relief usually follows a strict milk diet, with occasional doses of calomel and diuretics. Lotions should be warm and are better than ointments. A mixture of menthol, phenol, zinc oxide, and vaseline is useful. Cocaine externally is of little use as it is unabsorbed by the skin. Internally sedatives are advantageous, although in some cases tonics, such as glycerophosphates, are preferable. Attention to the diet is always essential, and a course of mineral waters or thermal baths in suitable cases is to be recommended.

597. Treatment of Infectious Skin Diseases.

H. H. YOUNG, JUSTINA H. HILL, and W. L. DENNY (*Arch. of Derm. and Syph.*, April, 1926, p. 465) have treated various infectious diseases of the skin by intravenous injection of mercurochrome-220 soluble, with the following results. High fever, occasionally marked gastro-intestinal disturbances, infrequently severe stomatitis, and rarely transient albuminuria, and casts might occur, but by beginning with small doses, such as 2 mg. per kilogram, and increasing gradually up to larger doses—5 mg. per kilogram—the patient could generally be given several injections without a marked reaction. Of 24 erysipelas patients so treated, 20 (83.3 per cent.) were cured; of 11 patients with boils or carbuncles, 10 were cured and 1 greatly improved; 4 cases of chancroidal ulceration all healed rapidly; of 36 patients with cellulitis and abscesses, 21 (58.3 per cent.) recovered promptly with no other treatment and 9 showed marked improvement; in 2 patients with gas gangrene the infection was eliminated; of 44 leprosy patients, 28 (63.5 per cent.) showed remarkable improvement. Good results were also obtained in cases of psoriasis, eczema, and syphilis. These results show that mercurochrome, administered intravenously, is a drug of great value in the treatment of infection of the skin with various streptococci, staphylococci, and bacilli, as well as in other types of infection.

598. Traumatic Psoriasis after Neosalvarsan.

P. H. VAN DER HOOG (*Nederl. Tijdschr. v. Geneesk.*, February 27th, 1926, p. 838) records the case of a woman, aged 27, who, after injection of neosalvarsan and mercury for a hard chancre, developed an arsenical erythema followed by psoriasis, from which she had never suffered before. Psoriasiform syphilis was excluded by the clinical picture, which showed the characteristic appearance of psoriasis after methodical scratching, whereas in psoriasiform syphilis purpura would have developed after this procedure. The diagnosis was also confirmed by histological examination. Similar cases of psoriasis following injections of salvarsan preparations have been recorded by Hesse, Pautrier, and Boutelier.

Obstetrics and Gynaecology.

599. Acute Post-partum Uterine Haemorrhage.

P. A. PETRIDIS (*Bull. Soc. d'Obstét. et de Gynécol. de Paris*, April, 1926, p. 221) reports a case of uterine inversion, which occurred in a primipara aged 27. Forceps delivery was necessary, but there was no perineal tear, and seventeen minutes after the birth of the child the placenta came away completely, though accompanied by considerable haemorrhage. Credé's method had been used very gently. The haemorrhage continued and gave rise to severe shock, which was unimproved by medicinal treatment. Vaginal examination showed the presence of a tumour, which was taken to be a fibroid. Vaginal tampons were inserted, but the haemorrhage continued, and it was not until a week later that a careful gynaecological examination revealed the presence of an inverted uterus, grey in colour, and suggesting the onset of gangrene. After prolonged treatment the uterus was restored to a healthy condition and replaced, and the patient subsequently became pregnant again, the child being born without a return of the inversion. Commenting on the case Petridis remarks that the cause of the inversion remains

obscure, as no traction on the cord or strong pressure on the uterus was exerted. The process of inversion continued progressively during the days after labour. It appeared that the anterior wall was first inverted, and that the rest of the uterus followed its descent. The slow reduction of the inversion by progressive vaginal tampons was probably due to decrease in size of the uterus after the relief of circulatory stasis and oedema. There was no constriction by the cervix, which was sufficiently large to permit the reduction of the inversion.

600. Pararectal Incision in Difficult Labour.

A. RIECK (*Zentralbl. f. Gynäk.*, March 27th, 1926, p. 773) reports the successful use of Schuchard's pararectal incision in difficult obstetric cases. The incision, which begins in the vagina about the junction of the upper and middle thirds and ends about the level of the tuber ischii, divides the sphincter vaginae and levator ani muscles. By this operation the length of the birth canal is diminished by approximately one-half and its axis becomes much less curved. Eight cases are mentioned in which Schuchard's incision was used. It rendered possible speedy termination of labour in four cases of pelvic and four of cephalic presentation in which labour had lasted several days. One case was that of a primipara in eclamptic coma with a temperature of 104°, whose child was born alive.

601. Conservative Treatment in Gynaecology.

ACCORDING to D. H. WESSELS (*Med. Journ. of South Africa*, March, 1926, p. 213), conservative treatment in gynaecology is often preferable to surgical operation, but while twenty years ago it was difficult to persuade patients to undergo an operation, they are now usually unwilling to adopt a conservative line of treatment. That enlargement of the uterus often occurs just before the menstrual period should be remembered when estimating the rate of development of a fibroid, and when dealing with atypical pregnancies or irregular haemorrhages. A pregnant uterus associated with irregular haemorrhages may, on examination, be found contracted and be mistaken for a myomatous uterus. The author gives details of a case of this kind in which hysterectomy was advised, but the diagnosis was corrected by a second examination when the uterus was fully relaxed, and a diagnosis of a four months' pregnancy could be established. Wessels considers myomectomy the operation of choice in treating fibroids during the child-bearing age, and has records of several full-term pregnancies after this operation, which in no case in his experience caused uterine rupture subsequently. He regards myomectomy as a more conservative measure than *x*-ray treatment. Haemorrhages due to fibrotic change of the uterus, whether associated with benign hypertrophy of the endometrium or not, are treated so satisfactorily by radium after a diagnostic curettage that hysterectomy is unnecessary. Discussing the ovary as the most frequent cause of unnecessary surgical intervention, he states that ovarian pain and tenderness are often due to inflammation elsewhere in the genital tract. He thinks that the flaccid and thin-walled Graaffian follicle cysts do not require operation, as they often rupture spontaneously or on bimanual examination. In other cysts of the ovaries, unless they are malignant, it is frequently possible to shell out the cyst without sacrificing much of the ovarian tissue. Wessels gives details of a case of bilateral dermoid cysts in an unmarried girl; the cysts were shelled out from both ovaries, and the girl subsequently married and bore three children. The author considers that the operation of salpingectomy for the cure of a gonococcal pus tube is not only an unnecessary procedure, but also pernicious, and he cites a case in which such an operation resulted in death subsequently, owing to abdominal adhesions. In many cases the pus in such tubes has been shown to be sterile, and in time the condition would clear up spontaneously.

602. Primary Syphilis of the Cervix.

R. S. CRON (*Amer. Journ. Obstet. and Gynecol.*, March, 1926, p. 378) reports two cases of chancre of the cervix, and discusses the apparent rarity of this lesion. In the course of the pelvic examination of some 4,000 women only six patients with primary syphilitic lesions of the genitalia were discovered; in two cases the infection was localized in the vaginal portion of the cervix. Cron believes that the apparent rarity of cervical chancre can be accounted for by the lack of symptoms, the rapid involution, and the absence of scarring. He suggests that routine visual examination of the cervix, especially in newly infected syphilitic women, will demonstrate a higher percentage of primary lesions. He adds that a negative Wassermann reaction is usually found during the primary stage and does not exclude syphilis.

Pathology.

603. Production of Antibodies by Artificial Pneumothorax.

T. VEBER (*C. R. Soc. de Biologie*, March 5th, 1926, p. 502) has estimated the antibody content of the blood and of the pleural fluid in tuberculous patients at various points during artificial pneumothorax treatment. The complement fixation test was used, with Calmette-Massol's technique and Boquet's methylic antigen. All patients giving a positive Wassermann reaction were excluded. The results showed that there was a marked rise in the titre of the blood during the characteristic crisis (fever, thoracic pain, and dyspnoea) which commonly precedes a pleural effusion; this was followed by a marked fall in the titre after the effusion, provided that the general state of the patients improved. The antibody titre of the pleural fluid always corresponded to that of the blood. In patients who had remained well for a long time after the effusion antibodies were absent both from the pleural fluid and from the blood. Since tubercle bacilli, either in an intact or in a broken-down condition, are present in pleural effusions, and since an antigen capable of fixing complement in the presence of a tubercle antiserum can likewise be demonstrated, the author infers that the sudden increase in the titre of the blood immediately preceding the development of a pleural effusion is due to the absorption into the circulation of tuberculous antigenic material through the pleura.

604. Action of Histamine.

J. H. BURN and H. H. DALE (*Journ. of Physiol.*, April 23rd, 1926, p. 185) have studied the vaso-dilator action of histamine, the substance supposed to be responsible for the vascular features of "shock." In the cat histamine causes a fall of blood pressure followed by a rise (secondary or pressor phase of histamine action), but after the suprarenal glands are extirpated this secondary effect does not occur. It is therefore concluded that the secondary phase is due to an output of adrenaline. This is corroborated by the following facts. If, before the injection of histamine, ergotamine (which antagonizes adrenaline) is injected, then only a fall of blood pressure is produced. The physiological converse of this is that very small doses of adrenaline, after an evanescent rise of blood pressure, produce a fall of it. This fall is attributed to the production of histamine, largely in the lungs. The authors conclude that the secondary pressor effect of histamine is due to accelerated output of adrenaline, and that the secondary depressor effect of adrenaline is due to the liberation of a histamine-like substance. The significance of these facts is discussed in relation to the balanced chemical control of capillary tone. O. INCHLEY (ibid., p. 282) believes that histamine shock is best explained by venous constriction. He finds that histamine in low concentrations constricts veins but not arteries. This constriction leads to a passive dilatation of the capillaries.

605. Cardiac Changes Produced by Cod-Liver Oil.

E. AGDUHR (*Acta Pediatrica*, March 6th, 1926, p. 319) reports that important organic changes, such as atrophy, degeneration, necrosis, and haemorrhages, were caused in white mice by the addition of 0.1 c.cm. per day per animal of cod-liver oil to their basal diet. These changes specially affected the heart. In the cardiac muscle cells there usually appeared pigment atrophy, sarcolysis, and vacuolous, albuminous, and waxy degeneration. Many muscle cells were destroyed and disappeared, the cardiac muscle being transformed into connective tissue. This change was more pronounced in the muscles of the ventricles, particularly in the outer walls of the right ventricle. When the changes were farther advanced small haemorrhages usually appeared in the cardiac muscles. On a basal diet inferior in vitamins and nutritive value excrescences developed in the heart, subendocardially, interstitially, or on the endocardium, probably after previous injury to the endocardium. They were most common in the auricles, but were also met with in the ventricles, in some cases being large enough to impede the blood flow. Associated with these severer cardiac changes were oedema of the lungs, subcutaneous oedema, and exophthalmos. The author finds that cats, dogs, and calves are even more adversely affected by cod-liver oil than mice, and raises the question whether cod-liver oil given to children over a relatively long period may not lay the morphological foundation for future cardiac disease. He quotes Mellanby's warning against giving large doses of cod-liver oil (JOURNAL, May 24th, 1924, p. 895) since tachycardia and cardiac discomfort may result. Agduhr believes that the organic changes in his experiments were due to poisonous substances ordinarily present in cod-liver oil, which could be removed without affecting the vitamin content of the oil. This is forming the subject of further investigation.

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

606. The Initial Site of Pulmonary Tuberculosis.

P. DOTTI (*Il Morgagni*, February 28th, 1926, p. 265) has examined the case sheets of 2,253 patients suffering from tuberculosis in Bologna between 1920 and 1924 and has classified them according to the degree of anatomical involvement of the lung. Patients in any stage of the disease who showed purely unilateral lesions were placed in group 1; those with bilateral disease, but with one lung more affected than the other, were placed in group 2; and patients with bilateral disease of equal extent in the two lungs were placed in group 3. Patients in the first group formed 34 per cent. of the total number; the lesion was in the left lung in 58 per cent., in the right lung in 42 per cent. of these. In group 2 the left lung was affected more severely than the right in 59 per cent. of 982 patients; the right lung more than the left in 41 per cent. The third group contained 485 patients; in these the lesions were of equal extent on the two sides. Combining the first two groups, it appears that of 1,768 patients, representing 78 per cent. of the total number examined, 772, or 44 per cent., were affected exclusively or more severely on the right side, and 996, or 56 per cent., on the left side. The author, therefore, concludes that tuberculosis begins more often on the left side than on the right. The reasons for this are to be found in the poorer ventilation of the left lung; in the less adequate blood supply, which leads to stasis and the consequent retention of gaseous and organized products; in its smaller size; and in its compression by the aorta. All these factors, he thinks, render the left lung a more favourable ground for attack by the tubercle bacillus than the right.

607. Pneumothorax and Pulmonary Abscess in Pertussis.

W. C. A. STEFFEN (*Arch. of Ped.*, January, 1926, p. 50) reports two cases of pertussis, one of which was complicated by pneumothorax in a girl aged 7, and the other by pulmonary abscess in a girl aged 5; both recovered. Only two previous cases of pneumothorax in pertussis have been recorded—by Malinowski in 1885 and Gelmo in 1860 respectively; and only one example of pulmonary abscess in pertussis is on record, which was described by Northrup in 1883. In view of the relative frequency with which a rupture of the lung into the mediastinum occurs, with its resultant subcutaneous emphysema, it is surprising that not more cases of pneumothorax have been recorded. Gelmo's patient had an extensive subcutaneous emphysema, and at the necropsy a left-sided pneumothorax and consolidation of the upper lobe were found. Steffen maintains that pulmonary abscess in pertussis is more frequent than the reported cases indicate, as instances of non-tuberculous cavities of obscure etiology are often encountered in children.

608. A Diagnostic Sign in Facial Paralysis.

A. RADOVICI (*Presse Méd.*, April 10th, 1926, p. 453), considering the difficulty that sometimes arises in distinguishing between peripheral and central facial paralysis, draws attention to a new diagnostic sign. He finds that when the palm of the hand, especially the thenar eminence, is irritated by a needle a reflex muscular contraction can be observed at the point of the chin. The persistence or exaggeration of this reflex on the affected side is in favour of a central lesion. The absence of the reflex on the affected side with presence on the sound side indicates a peripheral lesion. The absence of the reflex on both sides is of no diagnostic significance since this may occur in normal individuals. The presence of the reflex on both sides in a patient with facial paralysis suggests a central lesion. The author gives brief details of 25 patients where his observation was tested. In 10 cases of peripheral paralysis the reflex was constantly absent on the affected side; in 11 out of 15 cases of central paralysis the reflex was present on the affected side.

609. Eruptions due to Sanocrysin.

J. NOGUER MORÉ (*Ars Medica*, February, 1926, p. 29), who records four illustrative cases, states that the rashes caused by sanocrysin have features common to eruptions due to other causes, such as salvarsan, but present certain peculiarities. The appearance of the eruption depends on several factors. In some cases the eruption is an index of the toxicity of the product, while in others it points to idiosyncrasy on the part of the patient. Moré describes four varieties of sanocrysin eruptions—namely, scarlatiniform, morbilliform, urticarial, and lichenoid types. The urticarial and lichenoid types he regards as the final stages of the scarlatiniform type. The course of the eruption is as follows: after a prodromal stage which may be absent, characterized by intense itching and localized in different situations, but chiefly on the back of the forearms and wrists or outer side of the legs, there appear hyperaemic miliary or lenticular puncta, which are discrete at first, but later become confluent, forming patches on the elbows, knees, and elsewhere. The temperature is about 100.4°, and the patient complains of headache and prostration. In eight or ten days' time, before the eruption has faded, fine or course desquamation appears, and in fifteen to twenty days everything has disappeared. As the eruption fades, the itching, headache, and photophobia recur, the urine diminishes in amount, and an oedematous infiltration appears, being most marked on the forearms and legs, leaving the face unaffected, and lasting for eight days. The prognosis of these eruptions is generally good, and their appearance does not contraindicate the continuance of sanocrysin treatment.

610. Hysterical Paralysis of the Palate following Diphtheria.

G. BOENNINGHAUS (*Deut. med. Woch.*, February 19th, 1926, p. 322) states that though it is a familiar fact that palatal palsy is not an infrequent sequel of diphtheria, it is not so well known that after recovery from the organic paralysis children may in rare cases show a functional palsy due to a mere neglect of use of the no longer paralysed palate. It does not seem to be recognized that a functional palsy of this kind may take place in adults and recur periodically, as in the following case reported by Boenninghaus. The patient was a woman, aged 25, who since an attack of diphtheria two and a half years previously used to have recurrent attacks of nasal voice every two or three months, lasting for about eight days and then suddenly disappearing. The nasal twang was absent during singing and there was no regurgitation.

611. Erysipeloid in Man.

J. V. KLAUDER (*Journ. Amer. Med. Assoc.*, February 20th, 1926, p. 536), who records two illustrative cases, states that erysipeloid, which received its name from Rosenbach in 1884, was first described by Tilbury Fox in 1873. The salient clinical features are as follows. The disease is most frequent from May to September. The infection can always be traced to contact with dead animal matter or to crab bites or contact with crabs. The incubation period is from one to five days. A distinctive feature of the erythema is its purplish-red colour. The disease is confined almost exclusively to the hands, and rarely progresses above the wrists. The surface of the involved parts remains smooth. The subjective symptoms are sensations of burning, pricking, itching, and pain. A relapse of the erythema is not infrequent. German observers hold that erysipeloid and swine erysipelas are identical, erysipeloid, in their opinion, being a mild form of swine erysipelas. The causal organisms of the two diseases are likewise regarded as identical, differing only in virulence. The symptoms of swine erysipelas in man are those of erysipeloid in an aggravated form. The swelling is much greater, so that the fingers are frequently immobilized. The itching, burning, and pain are considerable. Lymphangitis and glandular involvement are frequent, and the disease is sometimes fatal.

612. Weil's Disease in Holland.

J. ENNEKING (*Nederl. Tijdschr. v. Geneesk.*, March 13th, 1926, p. 1063) refers to the cases reported by Goudsmit, Hammer, and Wolff, and Schüffner and Ruys (*Epitome*, October 10th, 1925, para. 288), and records the fourth case of Weil's disease that has occurred in Holland. The patient was a man, aged 32, in whom the diagnosis of Weil's disease was suggested by well marked jaundice, fever, petechiae, epistaxis, and blood in the urine. His serum caused agglutination of a strain of *Leptospira icterohaemorrhagiae* in a dilution of 1 in 250 on the seventh day of disease and three days later in a dilution of 1 in 10,000. Death occurred on the same day, and the autopsy showed haemorrhages in the various organs. A guinea-pig inoculated with the patient's urine died in ten days' time with typical symptoms of Weil's disease. The patient had probably been infected by rats which infested the place in which he worked.

613. Prophylaxis and Treatment of Measles.

J. A. MUÑOYENO (*Arch. de med., cir. y esp.*, March 20th, 1926, p. 550) states that the difficulty in obtaining convalescents' serum for the prevention of measles has been obviated by using the whole blood of the fathers or brothers of children exposed to measles. The technique is simple. Blood is withdrawn with aseptic precautions from a vein in the forearm into a syringe containing 2 to 3 c.cm. of a sterilized 10 per cent. sodium citrate solution to prevent coagulation. An intramuscular injection in one or two regions is given at once. In the case of convalescents' serum the dose is 1 c.cm. for each year, or 1/2 c.cm. for each six months. If the blood of brothers or fathers who have had measles some time previously is used, the dose should be increased three times. If it is desired to prevent the disease entirely, the injection should be given before the sixth day of the incubation period, but if attenuation is aimed at with permanent immunization the injection should be given later. This form of prophylaxis should be employed in all cases in which it is expected that measles may assume a malignant character, such as in scrofulous and rickety children and in those convalescent from a severe illness, especially of the respiratory system. Therapeutically the method is indicated in all cases of measles with severe respiratory complications. In such cases convalescents' serum is best, but if it is not available, the whole blood of the fathers or brothers who have had measles should be used after a clinical and biological examination of the donor has been made. The amount of blood to be injected is three times that required in the case of convalescent serum, and if the attack of measles has occurred a long time previously it should be four times as much.

614. Atypical Typhoid Infections.

A. LANDAU and M. FEJGIN (*Arch. Intern. Med.*, January 15th, 1926, p. 32) record six illustrative cases, in patients aged from 27 to 60, of typhoid infection in various localizations entirely devoid of the clinical symptoms of abdominal typhoid and probably without its characteristic abdominal changes. They maintain that the existence of typhoid bacteriaemia and a positive Widal reaction in so high a dilution as 1 in 400 or 1 in 800, together with a high temperature, is not always an absolute proof of abdominal typhoid, as such a syndrome may be observed in other localizations of typhoid infection, especially of the liver and gall bladder. These states of typhoid infection, although in some ways similar to typhoid fever, differ from it in (*a*) the presence of leucocytosis with neutrophilia, (*b*) the absence of rose spots, and (*c*) the absence of changes in the lymphatic system of the alimentary tract. Leucopenia with neutropenia, which forms one of the most characteristic symptoms of abdominal typhoid, probably does not depend on the biological quality of the typhoid bacillus, but on its secondary seat in the lymphatic system of the alimentary tract.

Surgery.

615. Obstruction of Small Intestine.

J. MCKENTY (*Canadian Med. Assoc. Journ.*, March, 1926, p. 260) discusses the diagnosis and treatment of obstruction of the small intestine in adults, based upon a study of 95 cases. He considers that the high mortality is due to delay in operating, which in primary cases is the result of doubt as to diagnosis owing to inadequate knowledge of the early symptoms, which are scarcely mentioned in the textbooks. His observations show that pain, vomiting, and absolute constipation unresponsive to enemata warrant a diagnosis of obstruction, the clinical picture of primary acute obstruction during the first twenty-four hours consisting only of peristaltic pain, vomiting, and constipation, with a soft flaccid abdomen and rarely a mild degree of shock. During the second day slight abdominal distension occurred in 25 per cent. of the cases and an accelerated pulse in 30 per cent.; while during the third day the vomiting becomes stercoraceous, the pulse more rapid, and the distension more marked. In obstruction secondary to peritonitis the symptoms appear as an exaggeration or recurrence of those of the pre-existing peritonitis; unduly persistent "gas pains," recurrence of vomiting on the third or later post-operative day, and negative results after enemata, are diagnostic points. In the early stage of primary obstruction a release operation will effect a cure in 90 per cent. of cases; in the late stages with symptoms of severe toxaemia drainage of the proximal loop by enterostomy is essential. McKenty concludes that, while improved therapeutic methods and the more frequent use of enterostomy in the secondary and late primary cases will cause some decrease in mortality, any marked decrease can only come from earlier diagnosis and operation.

616. Tumours caused by Oil Injections.

R. MOUGNEAU and L. MAGIMEL (*Journ. de Méd. de Bordeaux et du Sud-Ouest*, March 25th, 1926, p. 257) report the case of a woman, aged 60, who had five firm painless tumours, ranging in size from that of a chestnut to that of a hazel-nut, on the outer surface of the middle third of the thigh. These tumours appeared two months after the injection of camphorated mineral oil during an attack of influenza. Each tumour was firmly adherent to the fascia lata and one was attached to and moved with the subjacent muscle. The tumours were of cartilaginous hardness, and consisted chiefly of fully developed fibrous tissue which appeared to invade the adjacent adipose tissue. In certain areas there were traces of granulation tissue containing lymphocytes, giant cells, and a few epithelioid cells. No trace of mineral oil could be found. The muscle fibres adherent to one of the tumours had been invaded by bands of fully developed connective tissue. SABRAZÈS (ibid., p. 258) reports two similar cases, in which pseudo-tumours of the abdominal wall appeared after injections of camphorated mineral oil. In some parts the tissue surrounding the oily deposits resembled that of an epitheliomatous metastasis; in other parts, giant cells, lymphocytes, and plasmocytes, such as are found surrounding a foreign body, were present. Sabrazès considers that these tumours cannot be regarded as true epitheliomata.

617. Surgical Treatment of Bronchial Asthma.

F. ERKES (*Zentralbl. f. Chir.*, March 20th, 1926, p. 718) finds in the scanty records of cervical sympathectomy for the relief of bronchial asthma that the operation was performed on the left side in the majority of cases. In a few instances, resection was performed on the right side, after failure of a previous resection of the left sympathetic cord. Hitherto no test to indicate which side should be selected for operation has been described by any writer, except that Hesse found in cases of cardiac asthma that signs of irritation of the branches of the cervical sympathetic occurred more frequently on the left side, indicating it as the site for operation. Hesse also states that in cases of the so-called "asthma cardiaca dextra" the indications of cervical sympathetic irritation and pain are entirely or predominantly found on the right side; this would appear to indicate resection of the right cervical sympathetic. Erkes records the case of a workman, aged 36, whose illness commenced in 1917 after exposure to cold while on active service. At first the attacks recurred at intervals of about four weeks, and each attack lasted for about an hour. They grew more severe and frequent, until by 1920 they recurred every eight or ten days, and each attack lasted four or five days. The patient was incapacitated for six months, being confined to bed during the attacks, which were accompanied by a sensation of strangulation. The pupils were usually equally dilated during the attacks, but occasionally the right pupil only was affected. Medicinal and *x*-ray treatment failed to give relief. The right cervical sympathetic from the superior to the inferior ganglion was resected by von Flörcken's method and the wound healed by first intention. After the operation the attacks were less frequent and of shorter duration. Histologically the ganglion cells showed no appreciable changes and the nerve fibres and connective tissue were apparently normal. Four months later the patient reported that there had been no severe recurrence; he was in good health, and fit for work.

618. Estimation of the Date of a Fracture.

O. ANDREI (*La Chirurgia degli Organi di Movimento*, February, 1926, p. 254) thinks that it is possible to determine the age of a fracture by radiography, and cites an experience of 140 cases of fracture of different durations. He bases his estimations on the opacity, volume, and delimitation of the callus, on the characters of the line of fracture, and on the reconstituted bony tissue. In simple fractures of the shaft without displacement of the fragments the first change noted is a blunting of the edges and of the bony spicules, which shows about the end of the second week. Callus begins to appear between the sixteenth and twentieth days; it is clearly delimited at the third or fourth month, and reaches the opacity of normal bone at the eighth or tenth month. In the first year the callus shows no lamellar structure. The line of fracture disappears between the sixth and eighth months to become more opaque later, in the second year. In fractures with displacement the callus does not become delimited until later, about the sixth or seventh month, and is not reduced so readily as in simple fracture without displacement. In fractures of the fingers, blunting of the edges is observed as early as the first week, and callus appears as a delicate white cloud between the second and third weeks; it becomes clearly defined at the end of the fourth month, and between the sixth and seventh months it reaches the opacity of normal bone.

619. Chronic Abscess of the Tibia.

AUVRAY (*Bull. et Mém. Soc. Nat. de Chir.*, March 20th, 1926, p. 321) records a case of chronic abscess in a patient, aged 24, who had received a kick on the lower end of the tibia some years previously. The pain lasted only a few hours and there was no bruising. Six months later there was an acute exacerbation of pain which compelled the patient to rest. Since that time there had been intervals of freedom from all trouble, alternating with attacks of pain. Radiograms taken at different times demonstrated no bony lesion. Two years later, when seen by Auvray, there was some swelling round the ankle, but the skin appeared normal. On palpation over the tibia there was a well marked spot of localized tenderness near the lower epiphysis; pressure here caused acute pain. The diagnosis was then made of a localized abscess of the bone, and this was confirmed by radiographic examination. At the operation the bone was opened and a chronic abscess with thick pus was found in the lower end of the tibia. The pus was sterile and gave no growth on culture. The condition appeared to be a chronic osteomyelitis, probably originating from the kick. The patient had some boils at that time, and it is suggested that the infection may have arisen from this source.

620. Extraction of Needles and Fish-Hooks.

O. SUSANI (*Zentralbl. f. Chir.*, March 27th, 1926, p. 791) describes a simple and easy method of extracting needles and fish-hooks if less than 2 mm. in diameter and more than 3 mm. in length. The method is inapplicable when there is evidence of active infection, or when the foreign body is close to easily injured structures, such as large blood vessels or nerves. After a preliminary *x*-ray examination to determine the position of the foreign body, a 2 per cent. novocain-adrenaline solution is injected; a Record hypodermic needle of suitable calibre and fitted with a pear-shaped or conical metal plug, which serves as a handle, is thrust with aseptic precautions through a layer of sterile gauze into the skin and with the assistance of the fluorescent screen is entered in the axis of the foreign body, which is engaged by the needle-point. With a little manipulation the foreign body is made to enter the lumen of the needle, and the needle is then withdrawn with the foreign body in its lumen. In the case of fish-hooks and other barbed foreign bodies a larger needle is guided to engage the barb; a small incision may then be made and the extraction completed with forceps. The author has removed needles from the knee-joint with complete success; in one case the needle was broken off at the border of the patella, and in the second case it was broken and lying free in the joint. Both patients recovered full and painless movement of their knee-joints.

Therapeutics.

621. Administration of Adrenaline.

B. L. VELÁZQUEZ (*Arch. de med., cir. y esp.*, March 27th, 1926, p. 585) states that administration of adrenaline gives rise to a series of reactions by which its efficacy can be estimated—namely, hyperglycaemia, glycosuria, rise of blood pressure, and change in the pulse rate. The most constant reactions are the changes in glycaemia and in the blood pressure. Administration of adrenaline by the mouth is accompanied by hyperglycaemia but not by any obvious change in the blood pressure, which justifies the hypothesis that the drug is conveyed to the liver, where it is destroyed. Hypodermic administration of adrenaline causes considerable retardation and diminution of its action, the proportion being 1 to 4 as compared with the intravenous route. Intramuscular injection is less efficacious still, its activity being 1 to 6 or 1 to 8 compared with the intravenous route. Rectal administration gives rise to a glycaemic rate which does not exceed or is even lower than that obtained by the gastric route, while the blood pressure rates are slightly above those obtained from administration of adrenaline by the mouth. In contrast with the intravenous route the activity of absorption of adrenaline by the rectal route is 1 to 20 or 1 to 25.

622. Ephedrine in Bronchial Asthma.

H. E. MACDERMOT (*Canadian Med. Assoc. Journ.*, April, 1926, p. 422) reports the results obtained from the use of ephedrine for a period of three months in a group of twenty cases of severe and recurrent bronchial asthma in patients aged from 14 to 60. He found that this alkaloid produced well marked antispasmodic effects, which lasted longer than those of adrenaline, and that the treatment might be repeated safely during a prolonged period. In some cases 25 mg. was found a sufficient dose, while 50 mg. caused sensations of quivering and nervousness, with some headache, thirst, and giddiness; other patients required a dose of 50 mg. In most cases relief was obtained in from two to five minutes after swallowing a capsule of the remedy, with a feeling of relaxation in the chest, and in some cases a notable diminution in the mass of râles. The effect came more rapidly, as a rule, when the alkaloid was taken on an empty stomach. Many patients obtained an entire night of comfort after a single dose of ephedrine, or during the day were able to take exercise without distress. Protection appeared to last for about six to eight hours; little or no change in the blood pressure was observed. MacDermot recommends that the initial dose should be 25 mg.; this may be increased if required.

623. Ether in the Treatment of Suppurative Otitis Media.

G. B. MCAULIFFE (*Med. Journ. and Record*, April 21st, 1926, p. 503) recommends the use of ether in treating suppurating conditions of the middle ear. After cleansing the ear with a solution of boric acid it is partly dried and then filled with ether, the patient remaining recumbent until the ether has evaporated. This treatment is given twice a day. The patient is said to experience the same sensation as that given by hydrogen peroxide, and the method is described as being easy for home treatment. In the majority of cases it was found to be very beneficial and no ill effects were encountered. It is not applicable in cases of chronic mastoiditis, and is without value when the perforation in the drum is insufficiently large to allow passage of the ether. Short details are given of sixteen cases, and the author refers to Waterhouse's article on the use of ether in the peritoneal cavity and the bladder (JOURNAL, February 6th, 1915, p. 233).

624. Sanocrysin Treatment of Tuberculosis.

F. R. DE PARTEARROYO (*Arch. de med., cir. y esp.*, March 6th, 1926, p. 433) reviews the literature, and records his observations on cases of pulmonary tuberculosis treated in the Guadarrama Sanatorium by sanocrysin. His conclusions are as follows: (1) If employed with caution sanocrysin does not usually give rise to any bad effects. (2) It does not appear to have any bactericidal action. (3) It seems to be principally indicated in recent cases with effusion. In fibrotic cases its action is *nil*. (4) The doses should be small at first (10 cg.) and gradually increased to a gram or more. The injections should be given at first every third or fourth day and at the end of the course every tenth day. (5) In order to form an exact estimate of the therapeutic value of the drug, it should be given, not at the beginning of the disease, but after some improvement has been obtained by a rest cure and the condition has become stationary. Otherwise sanocrysin might be credited with the disappearance of fever, diminution of expectoration, and improvement in the auscultatory and radiological findings, which are really due not to the drug but to hygienic treatment. (6) While sanocrysin is of some value in the cases mentioned, it is not indispensable in the treatment of pulmonary tuberculosis.

625. Hexylresorcinol.

H. M. N. WYNNE (*Minnesota Med.*, April, 1926, p. 156) reports his experience in the use of hexylresorcinol in urinary tract infections in women. He recommends its administration by gelatin capsules containing a 25 per cent. solution in olive oil, one being taken directly after meals three times a day for three days, and gradually increasing up to four capsules three times a day by about the eighth or tenth day. Of three cases of chronic *B. coli* infection treated by courses of from 200 to 400 capsules one showed but little improvement, while the other two obtained complete relief of symptoms and sterilization of the urinary tract. Coccal infections appeared to be more susceptible to the treatment than the bacillary, and clinically the drug was found to have a distinctly antiseptic action in the urine of patients suffering from either infection. Wynne adds that it is important to commence with small doses, increasing them gradually and continuing the full doses over a considerable period of time, during which alkalis should be avoided and the fluid intake regulated to allow of sufficient concentration of the drug in the urine.

626. Dichloramine-T in the Treatment of Wounds.

D. S. ADAMS (*Boston Med. and Surg. Journ.*, April 22nd, 1926, p. 737) reports his experience of using dichloramine-T in clean and septic wounds for nearly seven years. He adds to 25 grams of crystalline dichloramine-T enough chlorcosane to make 500 grams by weight, and he has found this 5 per cent. solution adequate for all purposes. The mixture was placed in 4-oz. brown bottles, and proved stable if kept cool and in the dark. Before its use the affected parts were shaved, cleansed with benzine, and 70 per cent. iodine applied. After excision of any foreign matter and the devitalized soft tissues the affected parts were thoroughly covered with dichloramine-T, and partial, or complete, skin closure effected. In

probably infected wounds, such as those due to street accidents, the deeper parts were packed with gauze strips saturated with dichloramine-T, and hot saline or saturated boric acid dressings were applied. The first dressings usually followed after forty-eight hours, the packs being removed and fresh dichloramine-T sprayed over the wound or applied to the surfaces on cotton swabs. Adams found that in head injuries dichloramine-T might safely be applied to dural and subdural structures; in abdominal injuries its use is not advised, nor for burnt surfaces, nor in suppuration of the pleura or peritoneum. He concludes that by this method a simple, uniform technique of wound treatment is easily obtained with a minimal expense, and a rapid formation of healing surfaces. The earlier dressings are associated with an unpleasant burning sensation which lasts for a few minutes, but is compensated by the absence of toxic symptoms. Favourable results were obtained in such bone conditions as osteomyelitis and compound fractures, and there was a total absence of infection with gas-forming bacilli.

Disease in Childhood.

627. Pneumothorax in Young Children.

A. MONCRIEFF (*Brit. Journ. Child. Dis.*, January–March, 1926, p. 37), who records a case in a male infant aged 1 year 10 months, states that the occurrence of pneumothorax in babies or young children is comparatively uncommon. He points out that though many of the recently recorded cases seem to have been tuberculous in origin, tuberculosis, especially in young children, is not a common cause of pneumothorax. In his own case the negative Pirquet reaction and favourable issue suggested that the case was not tuberculous but was probably caused by the rupture of a subpleural emphysematous vesicle in the course of a bronchopneumonic process in the right lung. The absence of any pus in the pleural cavity was against rupture of a subpleural abscess, which is the commonly accepted cause in post-pneumonic cases.

628. Nephrolithiasis in Children.

S. SIMONS (*Nederl. Tijdschr. v. Geneesk.*, March 27th, 1926, p. 1290), who records two cases, in a girl aged 5 and a boy aged 9 respectively, states that since 1900 only two examples of renal calculus and two of stone in the bladder have been met with in children at the Amsterdam University clinic for internal diseases. In Italy and Hungary, on the other hand, renal calculus in children is much less rare. Although the diagnosis can only be made with certainty by *x*-ray examination, as was done in Simons's cases, the possibility of nephrolithiasis should be considered in cases of renal haemorrhage in children for which no obvious causes can be found. Both Simons's patients were given 30 grams of glycerin a day mixed with equal parts of water. In the boy a stone consisting of calcium carbonate, and measuring 9 by 6 mm., was rapidly expelled. In the girl, however, in whom the stone, according to the skiagram, was much larger, the treatment had no effect, and the associated pyelitis was treated in the ordinary way. Although glycerin is not always of avail, it serves to expel small stones and thus helps to prevent the formation of large calculi.

629. Infantile Otitis Media.

DANA W. DRURY (*Boston Med. and Surg. Journ.*, January 21st, 1926, p. 96) has analysed the characters of otitis media as it occurs in very young babies. Otitis is favoured in infants by the fact that the tympanic cleft is filled with mucus and fluid, and both are excellent media for the growth of pathogenic bacteria. The upper part of the cleft is comparatively wide and there tends to be a large collection of inflammatory products in the attic region. In addition to this the cleft is incompletely divided into a number of small cavities by septa of mucous membrane. The Eustachian tube is very short and wide, its musculature is very flabby and ill developed, and it provides an excellent path for infection. Thus the middle ear in infants is very prone to be infected, and drainage is difficult owing to the anatomical nature of the cleft. It is often a matter of difficulty to localize the trouble in a small baby, but the ears of a child in pain should be examined. The drumhead is horizontal, the meatus often swollen, and a red engorged membrane may be covered and hidden by a layer of desquamated cells, making the examination difficult. There are usually signs such as tenderness, injection, and bulging, but any of these may be absent. Often there is a protruding white opaque membrane, and incision releases a quantity of muco-pus, indicating a low-grade infection. The temperature is usually raised in the evening but normal in the morning. Incision of the membrane is the correct treatment and may have to be repeated. Persistence or frequent recurrence of the discharge points to a naso-pharyngeal focus of infection, and adenoids should be suspected; if present they should be removed at once. In infants the tendency is to antral and mastoid involvement rather than to intracranial or labyrinthine trouble. Once this is evident the antrum should be opened and drained, but enough time may be allowed for a protective zone to form. In certain cases there is formation of an abscess in the antrum without any infection of the middle-ear cleft. The best sign of mastoid infection is flattening out or sagging of the posterior wall of the external meatus.

630. Amoebic Dysentery in Children.

J. M. PARDO (*La Med. Ibera*, February 26th, 1926, p. 245, and *Arch. de med., cir. y esp.*, February 27th, 1926, p. 398), who records two cases in a brother and sister, aged 2 years and 9 months respectively, emphasizes the intensity of the intestinal symptoms in contrast with the low degree of fever. The urine in both cases showed a large quantity of urates. The heart always remained in a satisfactory condition. During the course of the disease a state of dehydration set in resembling uraemia owing to its being associated with oliguria and restlessness, but was readily overcome by hydrotherapy and ingestion of water. In the treatment of amoebic dysentery in children the dose of emetine should be gradually increased until 1/2 cg. per kilo of body weight is reached. The work of Beurnier, Clapier, and Marcoux induced Pardo to associate stovarsol with emetine in doses of 0.3 cg. daily with satisfactory results.

Ophthalmology.

631. Metastatic Intraocular Mycosis.

F. H. VERHOEFF (*Arch. of Ophthalmol.*, May, 1926, p. 225) records a case of unilateral intraocular mycosis derived by metastasis from an undiscovered systemic focus, with hepatic and endocardial involvement. A man, aged 60, who was an inspector of cars which had contained cattle, complained of lassitude, weakness in the right hand, and fever; he later developed a metastatic purulent right endophthalmitis necessitating enucleation. He had chronic mitral disease, probably due to subacute bacterial endocarditis, with slight hepatic enlargement, and a small sore on the right shin was excised subsequently. The Wassermann and Widal tests were negative and blood cultures remained sterile. The ocular infection being confined to the interior of the eye was obviously metastatic in origin, and the persistent fever, enlarged liver, and endocarditis indicated the presence of other foci, though the portal of entry of the organism and the site of the primary focus could not be discovered. The micro-organisms, found only in the subretinal exudate, were closely related to the actinomyces group since they produced abscesses and consisted of filaments which formed granules and peripheral clubs, but they differed in that the filaments were more delicate, unbranched, and Gram-negative; they were also not acid-fast. Following enucleation of the eye the fever, enlarged liver, and endocarditis persisted, in spite of treatment, till death five months after the onset of the first symptoms. Although such ocular involvement is exceedingly rare Verhoeff considers it is possible that systemic infection of a milder type without ocular involvement may not infrequently occur and escape recognition because no lesions accessible for bacteriological examination are produced.

632. Charting the Visual Field.

M. U. TRONCOSO (*Brit. Journ. Ophthalmol.*, May, 1926, p. 280) advocates the adoption of a new method of recording the area of the visual field with a view to simplifying the present elaborate procedure. As mapped now, the findings in the perimeter have to be inverted twice; this method leads to confusion and misunderstanding, and is the outcome of a faulty mental habit violating the anatomical rule which requires the subject to be considered as standing in front of the observer. He points out how much easier it would be to follow this anatomical rule and consider the visual cones of the patient projected into the space in front of the observer—the right field in front of the right eye and the left in front of the left eye—recording the fields as they are found in the arc of the perimeter with only one inversion instead of two. This method does not involve any change in instruments except that the campimeter should be made of cloth so that pins may be inserted, and marking the limits and defects in the field on the side facing the operator. It would be advantageous also to standardize the notation of the meridians in the charts, which at present is confusing. Troncoso claims that as the result of these changes it will be easier to under-

stand and record the monocular and binocular fields of fixation than is at present the case after the inversion necessary for transferring them to the position of the observer's eye. Similarly, abnormalities in mobility of the eye will be rendered less difficult to define when considered in the standard anatomical position without reversing the findings.

633. Intraorbital Anaesthesia.

M. D. ICOVE (*Amer. Journ. Ophthalmol.*, April, 1926, p. 260) describes the technique and applications of intraorbital anaesthesia by the perineural injection of a 4 per cent. solution of novocain about the area of the ciliary ganglion in order to block the sensory nerves of the cornea, sclera, and iris. The injection is made through the skin at the junction of the lower and outer border of the orbit between the external and inferior recti, the needle being directed slightly upward and inward (for about 5 cm.) to avoid striking the floor of the orbit, and the entire amount of the novocain is injected posteriorly. Ample time must be allowed for absorption to take place, the best time to operate being about half an hour later. No toxic effects have been observed in over a thousand injections of novocain in amounts varying from one-half to 4 c.cm. From his own experience Icove advocates its use in operations for cataract, glaucoma, enucleation, and when giving painful subconjunctival injections such as of mercury.

Obstetrics and Gynaecology.

634. Vaginal Hernia.

L. M. MILES (*Surg., Gynecol. and Obstet.*, April, 1926, p. 482) reports two new cases of vaginal hernia and discusses under the inclusive term "pelvic hernia" all hernias through the pelvic floor, subclassifying them as perineal, pudendal, or vaginal (anterior or posterior) according to the point of egress. Nine cases of vaginal hernia previously reported in the literature are considered. While they may be congenital the majority are acquired, following the trauma of pregnancy or child-bearing. Hernias between the rectum and vagina usually develop gradually; of those reported only two appeared suddenly, and only one showed signs of strangulation. Symptoms are more marked in the anterior variety than in the posterior, incapacity for work owing to the inconvenience of the protruding mass being the chief complaint rather than pain. The diagnosis from rectocele and cystocele constitutes the chief difficulty, there being no peritoneal sac in these latter. Since the internal ring is large these hernias disappear in the recumbent position, only to reappear in the erect posture or on straining or coughing, and replacement is accompanied by gurgling from the contained coils of intestine. The best method of treatment is by a perineal operation with excision of the sac and repair of the perineum combined with an abdominal operation to obliterate the cul-de-sac.

635. Spontaneous Birth of the Transversely Placed Head.

R. BRÜHL (*Zentralbl. f. Gynäk.*, March 13th, 1926, p. 646) records in detail the labour of a 2-para, aged 25, whose pelvis was somewhat flattened and had a true conjugate of 9.25 cm.; the previous labour had terminated spontaneously at seven and a half months. The head was delivered with the sagittal suture in the transverse diameter of the outlet (this diameter being of normal size) with the left arm behind and the right in front. Uterine contractions were forcible throughout labour, which lasted twenty-six hours; the child weighed 3.5 kg. and was 53 cm. in length. That the foetal head should pass through the pelvis with its long axis persistently in the transverse diameter appears not to be excessively rare; in the German records Brühl has found 22 such cases of vertex presentation, 4 of face presentation, and 23 of brow presentation. The etiological factors favouring such a mechanism of birth are not clear; many cases have been first labours, pelvic contraction has not commonly been present, the foetuses have been of very large as well as of very small dimensions, but as a rule the patients have been multiparae with flaccid soft parts at the pelvic outlet. According to Heinricius 1 in 10 of brow presentations is characterized by persistence of the sagittal suture in the transverse plane.

636. Unusual Varieties of Extrauterine Pregnancy.

A. SCHWARTZ (*Paris Méd.*, March 27th, 1926, p. 297) reports some atypical forms of ectopic gestation. One patient complained of frequent copious uterine haemorrhages, persisting for one or two days, and recurring after a few days. In the intervals a large tumour could be felt to the right of the uterus; after a haemorrhage it disappeared. A diagnosis of ectopic pregnancy was confirmed at operation. There was a right tubal pregnancy situated in the ampulla, the tube was dilated and permitted the blood to escape into the uterine cavity. In another case the patient complained of pain and metrorrhagia, preceded by amenorrhoea persisting for one month. The pain was particularly severe at the moment of defaecation. While under observation the patient had a severe haemorrhage from the anus. Median laparotomy was performed and a large tubal pregnancy was found attached to a coil of small intestine and closely adherent over a large area to the lower part of the sigmoid where it had perforated. The right ovary and tube were removed, the adhesions were separated with difficulty, and the sigmoido-rectal perforation sutured. A year afterwards the patient had a normal confinement. In a third case, the patient, previously quite regular in menstruating, had gone nine days beyond the usual time. This was followed by small daily haemorrhages. There was a fluctuating tumour to the right of the uterus as large as a foetal head. Laparotomy disclosed a tubo-ovarian pregnancy, almost filling the true pelvis. There was no intraperitoneal haemorrhage, but on puncturing the cyst 400 grams of almost pure blood was evacuated. The right adnexa were removed and the cyst wall sutured. The ectopic pregnancy had developed in a tubo-ovarian cyst. A fourth case was that of a patient operated on by the author in 1923 for a left ectopic pregnancy. In 1925 there was amenorrhoea for twelve or fifteen days followed by slight pain and uterine haemorrhage for eight days, when signs of collapse occurred followed by sudden recovery. The uterine cavity was so dilated that Lévy-Solal diagnosed very early uterine pregnancy. Under anaesthesia nothing abnormal was found in the pelvis. The uterus was cautiously curetted. Recurrent pain and haemorrhage necessitated laparotomy, and an ovum as large as a pigeon's egg, containing an embryo 12 mm. in length, was found with its membranes solidly adherent to the upper part of the rectum and neighbouring peritoneum—hence the absence of any pelvic tumour. This was a case of abdominal or tubo-abdominal pregnancy complicating an ordinary uterine pregnancy. The patient made a complete recovery. It is remarkable that in three of the above cases there was no trace of intraperitoneal haemorrhage.

637. Intrauterine Transplantation of Ovary.

R. B. P. MONSON (*Med. Journ. of Australia*, February 27th, 1926, p. 229) discusses intrauterine transplantation of the ovary and its clinical applications. He has found that the ovary can be successfully transplanted into the cavity of the uterus of the rabbit provided that its blood supply is preserved intact. Failing this, it was found that the transplanted ovary completely disappeared and definite uterine changes occurred, the body becoming flaccid, cylindrical, and elongated even to twice its normal length, and surrounded by dense deposits of fat with a change in colour to pale yellow. Monson refers to the results obtained by Tuffier and Estes in the human subject, the former opening the uterus on its posterior wall after previous dilatation of the cervical canal with tents for twelve hours, and then suturing the ovary into the uterine cavity so that one-third of it projects into the uterus. Estes adopts the method of suturing the ovary into the uterine cornu. Menstruation continued in all the twenty-nine cases operated upon by Tuffier, and one gave birth to a living child at term. Of twenty-seven cases reported by Estes, all but one continued to menstruate, while six became pregnant and four carried two pregnancies to a successful termination. No mortality has so far been recorded, and the operation appears to be justifiable in suitable cases when double salpingectomy is unavoidable and the patients wish to retain the possibility of child-bearing.

638. Diet in the Pre-eclamptic State.

V. J. HARDING and H. B. VAN WYCK (*Journ. Obstet. and Gynaecol. of the British Empire*, 1926, Spring Number, p. 17) have investigated the effect of various diets in patients showing evidence of the pre-eclamptic state as indicated by oedema, high blood pressure, headache, and blurring of vision. They find that protein or fat even in excess produces no ill effects, but by strictly limiting the intake of sodium chloride they were able in all cases to avoid the occurrence of convulsions. They agree, therefore, with the view recently expressed by de Wesselow and Wyatt that there is no necessity to restrict protein intake in the majority of pre-eclamptics. They advocate that the patient should be put to bed and given salt-free food until salt excretion in the urine reaches and remains at a minimum of 2 to 3 grams a day. The oedema becomes much diminished, and then 3 grams of salt, which is sufficient to maintain equilibrium, is added to the daily diet. It is said, therefore, that ordinary hospital or home diets can be used in the treatment of pre-eclampsia, provided they are salt-free. The albuminuria does not always disappear completely. Violent purgation

and forced intake of fluids are unnecessary forms of treatment. The authors are inclined to consider the oedema and nephrosis of the pre-eclamptic state as symptomatic of generalized vascular disturbance. They find that accompanying the progressive hydraemia of pregnancy demonstrated by Plass and Bogert's estimation of the plasma proteins there is a coincident increase (maximum about the seventh month) in the blood chloride concentration. The inclusion of one week in four on a salt-free diet is suggested as a measure which may be employed in the pre-natal clinic with the object of avoiding eclampsia and pre-eclampsia.

639. Anterior Abdominal Hysterotomy.

P. OGINZ (*Surg., Gynecol. and Obstet.*, April, 1926, p. 523) discusses the indications for anterior abdominal hysterotomy for the interruption of pregnancy and sterilization. He describes his technique, which he claims fulfils all the requirements of the ideal operation, since it is simple, can be performed at any time during the pregnancy, entails a minimum loss of blood, secures complete sterilization, and is capable of performance under any form of anaesthesia within half an hour. Through a mid-abdominal incision the uterus is opened anteriorly, and after delivery of the embryo and placenta 1 c.cm. of pituitrin is injected directly into its musculature and the wound closed by two continuous catgut sutures. One tube is then clamped at its isthmic portion and picked up so that a knuckle is formed, under the apex of which a silk ligature is passed and tied first over one limb and then over the other; the apex is then cut off and both raw surfaces cauterized. The same procedure is then repeated on the other tube. By this method the anastomosing circulation between the uterine vessels and the ovary is not interrupted. Oginz considers that the operation is indicated for women suffering from chronic debilitating disease and in cases where a continuation of the pregnancy would endanger the patient's life. Such conditions are: (1) pulmonary tuberculosis accompanied by fever, rapid pulse, sweats, and loss of weight; (2) such cardiac diseases as aortic regurgitation and mitral disease with attacks of decompensation, and in auricular fibrillation and myocardial degenerations due to chronic infections; (3) chronic nephritis and hypertension; and (4) recurrent toxaemias, complicated diabetes, certain nervous and mental diseases such as chorea, such blood diseases as pernicious anaemia and leukaemia, and severe thyroid toxaemia. He finds that patients stand the operation well and recover rapidly.

Pathology.

640. Anaerobic Bacteria in Appendicitis.

M. WEINBERG, C. RENARD, and J. DAVESNE (*C. R. Soc. de Biologie*, April 9th, 1926, p. 813) have studied the microbic flora of the inflamed appendix, particularly the anaerobic bacilli of the gas gangrene group. Of these *B. perfringens* was much the commonest, being present in about 33 per cent. of cases; occasionally *B. sporogenes* was found, and *B. fallax* has been recovered recently on two occasions. In the course of an investigation into eight cases of appendicitis the authors isolated *B. histolyticus* twice and *V. septique* twice; in one case these two organisms were associated. In the first case—acute appendicitis and periappendicular abscess—the two organisms were present together with an anaerobic streptobacillus, an anaerobic Gram-positive bacillus forming zoogloeae in liquid media, and *B. coli*. The strain of *B. histolyticus* was highly toxic to rabbits. In the second case—acute appendicitis during influenza—*B. coli*, a staphylococcus, and *V. septique* were isolated. In the third case—putrid gangrenous appendicitis in a child aged 3—an enterococcus, *B. pyocyaneus*, and *B. histolyticus* were found; the last two organisms were very pathogenic for guinea-pigs. From these results and from the work of other authors it is clear that the pathogenic anaerobes of the gas gangrene group are frequently found in acute appendicitis; the proportions in which each is present have yet to be worked out. The authors consider that these organisms are concerned in the etiology of the disease. In favour of this is the success that has attended the administration of polyvalent anti-gangrenous serum, advocated by Weinberg eight years ago. They believe that when the bacteriology of the inflamed appendix is fully known, the serum treatment of appendicitis should be even more valuable than at present.

641. The Cause of Acute Polymorphic Erythema.

C. LEVADITI, S. NICOLAU, and P. POINCLOUX (*Presse Méd.*, March 17th, 1926, p. 340) describe the isolation of an organism which they regard as the specific cause of acute polymorphic erythema. In March, 1925, one of the authors became suddenly ill with a septicaemic disease characterized by three successive eruptions on the skin of macules, papules, and small nodules, accompanied each time by a fall in the temperature; there was arthralgia affecting the smaller joints, the spleen was enlarged, and there was severe pharyngeal pain. Convalescence was established on the twelfth day, but the joints remained painful for a fortnight or more afterwards. Two blood cultures were taken, and the contents of a papule examined. In each case an organism was grown which they describe as being a non-capsulated, non-sporing, Gram-negative bacillus, 2 to 3 μ long by 0.5 μ broad, growing in chains, and showing marked pleomorphism. This was especially noticeable in artificial cultures, in which cocci and fusiform bacilli appeared. Growth was best in serum or ascitic broth to which a small fragment of rabbit testicle had been added; large flocculi formed on the walls of the tube, but the medium itself remained clear. On blood agar very small dew-drop colonies were seen. The organism is a facultative anaerobe; it was destroyed by heat at 60° C. in half an hour; it formed no toxin, and was found to be virulent to rabbits, guinea-pigs, mice, and monkeys. Injected intratesticularly into rabbits it gave rise to an orchitis followed by general peritonitis. Injected intravenously it might give rise to arthritis or to an erythematous eruption on the skin. Immunity was easily established. The authors consider that this organism is probably responsible for the polymorphic erythemata and for erythema nodosum.

642. The Relation between Malta Fever and Infectious Abortion of Cattle.

G. FAVILLI (*Lo Sperimentale*, April, 1926, p. 41) contributes to the vexed question of the relation between Malta fever and infectious abortion of cattle. In 1924 and 1925 there was an epidemic of Malta fever in Florence and in other parts of Italy, where the incidence of this disease is normally very low. Many of the cases were traced to infection from goats, but in several others the method of infection remained undetermined. The author collected a number of strains of *B. melitensis* from human beings and made a comparative study of them with *B. abortus*. Neither morphologically, culturally, nor biochemically could any difference be made out between the two organisms. Their pathogenicity to laboratory animals was likewise similar. The subcutaneous injection into guinea-pigs of 1/4 to 1/2 c.cm. of a suspension of either organism, made by rubbing up a forty-eight hour culture in 5 c.cm. of saline, proved fatal in about a week; at autopsy the organisms were recovered in pure culture from the local abscess, the liver, spleen, and bile. In the hands of other workers, however, the pathogenicity of these organisms to guinea-pigs has proved very low. Whether these results of Favilli's are to be attributed to an increase in virulence is doubtful. Agglutinating serums were prepared by the injection of rabbits with six strains of *B. abortus* and five strains of *B. melitensis*. Cross-agglutination completely failed to distinguish between the two organisms; nor was the absorption test any more successful. The effect of heating the serums to 65° C. was tried, since this has proved of value in the hands of Ficai and Alessandrini in distinguishing between the specific and group agglutinins. But the sole effect of the heating was to lower the titre about one-half; both organisms were agglutinated equally at the lower level. The author concludes that *B. melitensis* and *B. abortus* must be regarded as two varieties of one bacterial species, differing only in their adaptation to different animal hosts.

643. The Oxygen Consumption of Atrophied Muscles.

A. E. BERYL HARDING (*Journ. Path. and Bact.*, April, 1926, p. 189) has compared the oxygen consumption of an atrophied quadriceps extensor muscle in rabbits with that of the same muscle in the sound leg. It was found that whereas the average difference between the two legs of normal rabbits was 43.5 c.mm. of oxygen per 100 grams of muscle a minute, that between the normal and the atrophied legs of the experimental animals was as much as 405 c.mm., the oxygen consumption being greater on the atrophied side. Six rabbits in which a streptococcal arthritis of the knee had been artificially produced were taken, and their left legs put up in plaster for three weeks. Determinations made at the end of this time showed that the oxygen consumption of the muscles of the normal and experimental legs was approximately equal. It would appear, therefore, that a muscle which is undergoing atrophy as the result of arthritis consumes more oxygen than a healthy muscle, but that if it is immobilized this extra oxygen consumption is prevented. The author suggests that there are two different kinds of muscular atrophy; in one the muscle receives an abnormal number of impulses from the joint leading to an increased katabolism and associated with an increased oxygen consumption; the other, a pure disuse atrophy, in which the afferent stimuli are reduced and the oxygen consumption is not increased.

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

644. Paraplegia and Hodgkin's Disease.

F. PARKES WEBER (*International Clinics*, 1926, vol. i, p. 127) has collected details of twenty cases of Hodgkin's disease complicated by paraplegia, in which the *post-mortem* findings included tumours invading the spinal canal, syringomyelia, a band of cellular pachymeningitis interna, parenchymatous changes in the spinal cord, and tuberculosis. He raises the question whether deep *x*-ray treatment may give rise to transverse degenerative changes in the cord, with paraplegic symptoms, in the same way that the extensive use of *x*-ray treatment in mammary cancer may cause pulmonary fibrosis. The tumour-like growth present in Hodgkin's disease may also, he suggests, have a tendency to become malignant, a "Hodgkin's sarcoma" arising from a "Hodgkin's granuloma." The author reports a case in which a mediastinal tumour infiltrated the sternum, lungs, pericardium, and some of the ribs: the first evidence of the growth was found in a rib, and was regarded as sarcomatous or syphilitic, but the latter possibility was almost certainly excluded. A year and a half later the mediastinum was found to be extensively involved, and the lymphatic glands in the right axilla and on the left side of the neck were infiltrated. The blood count was not far removed from the normal. The anaemia and weakness increased, there was general cutaneous pruritus—a common symptom of Hodgkin's disease—and a swinging type of pyrexia. Death followed, due to the pressure of the tumour, which was found to have a structure resembling that of the growth in Hodgkin's disease. The author considers that such a malignant progress in Hodgkin's disease would afford a possible explanation of the paraplegia which sometimes appears.

645. Poisoning following the Oral Administration of Bismuth Subnitrate.

W. H. RESNIK (*Bull. Johns Hopkins Hosp.*, May, 1926, p. 323) reports a case of bismuth poisoning in a woman suffering from diabetes mellitus. Before admission to hospital she had been given in a fortnight about 5 to 7 oz. of bismuth subnitrate by the mouth. The symptoms comprised a bluish-black discoloration of the gums, which were swollen and inflamed; a similar discoloration of the tongue, most noticeable at the apex of the papillae and arranged in vertical striations along the lateral margins; a patchy, diffuse discoloration of the buccal mucosa; swelling and tenderness of the parotid glands; a moderate anaemia, the erythrocytes being 3,100,000 per c.mm., the haemoglobin 40 per cent., and the leucocytes 9,000 per c.mm.; and basophilic stippling of the red cells. The clinical picture, in fact, closely resembled lead poisoning. Bismuth was detected in the urine. Recovery followed the withdrawal of the salt. In discussing the features of bismuth poisoning the author states that the metal is excreted by the salivary and buccal glands, by the kidneys, and by the large intestine; hence the main lesions are stomatitis, nephritis, and colitis. When given by subcutaneous or intravenous injection in treatment of granulating wounds, of chronic suppurating sinuses, and of syphilis, the appearance of the first symptoms is generally within a fortnight of the commencement of treatment. Poisoning after the oral administration of bismuth subnitrate is apparently very uncommon.

646. Erythema Infectiosum.

T. P. HERRICK (*Amer. Journ. Dis. Child.*, April, 1926, p. 486) records 74 cases of erythema infectiosum. The evidence indicates that the disease is a distinct entity, is infectious, and results in the establishment of a specific immunity. The distinguishing features of the disease are its occurrence in epidemics, the lack of constitutional symptoms, the lack of any features distinctive of the other exanthems, the long course and characteristic progression of the rash, its evanescence at all stages, and particularly the irregular but brilliant outlines seen on the arms and legs in the third stage and in the recurrences. There are no prodromal symptoms. The first sign is usually a dusky flush, which appears on the cheeks. While distinctly outlined, the rash on the face has a slightly irregular edge and is definitely raised, as a rule. Frequently this first stage is overlooked, the first sign noticed being the second stage of generalized involvement. The generalized rash is usually well marked and slightly papular on the buttocks. The upper part of the arms also usually shows a papular rash. The trunk may be extensively involved with a rash which is definitely papular, but often there are only a comparatively few faint macules. When the rash is not well marked the existence of any disease at this stage could easily be doubted. The second stage lasts from several days to a week, and passes gradually into the third stage, when the rash is limited to the arms and legs, and the outlines persist for another week or longer. The rash on the lower part of the arms may be the only manifestation of the disease noticed, and the appearance there when typical can scarcely be confused with any other disease. The rash starts on the back of the forearm, just above the wrist, and in the early stages cannot with absolute certainty be distinguished from sunburn. After a day or two it spreads farther towards the sides and up to the elbow, clear areas appear in the centre, and the outline is more irregular and more distinctly marked off from the surrounding skin. The rash spreads peripherally, and small clear areas appear in the centre, which increase in size and coalesce, thus giving rise to the bright red irregular outlines typical of this stage. By the end of a week the back of the arms will be clear, except around the elbow and near the wrist, and the irregular outlines will have spread over the sides of the forearm to meet on the flexor surface. These outlines were described by one mother as "lakes and rivers on a map"; they are the most distinctive features of the disease. No treatment is indicated. Isolation and quarantine might limit the spread of the disease, but the lack of serious symptoms or sequelae makes such a course unnecessary.

647. Narcolepsy as a Post-encephalitic Syndrome.

W. G. SPILLER (*Journ. Amer. Med. Assoc.*, March 6th, 1926, p. 673) states that since Gélineau first described narcolepsy in 1880 the recognition of this disorder as a distinct entity has been much disputed. By some it has been considered a symptom-complex occurring with epilepsy or hysteria. Redlich has recorded cases in which epidemic encephalitis was followed by short attacks of sleep, occurring several times daily, and refers to other examples in the literature. Spiller now reports three cases of narcolepsy in males aged 28, 22, and 15 respectively, in none of whom was there a clear connexion with epidemic encephalitis, though in one there was a history of an attack of influenza and diplopia, and in two the sleep at night was interrupted, suggesting the inversion of normal rhythm frequently observed in epidemic encephalitis. Spiller concludes that though it would be assuming too much to assert that narcolepsy is always a post-encephalitic syndrome, it may occasionally be a sequel of epidemic encephalitis.

Surgery.

648. Displacements of the Semilunar Cartilages.

P. LE BRETON and R. M. CLEARY (*Med. Journ. and Record*, May 5th, 1926, p. 576) consider the diagnosis and treatment of displacements of the semilunar cartilages, based on a survey of fifteen cases of removal. The account of the symptoms given by the patient is important, and, while locking is typical when present, inability fully to extend the knee is the most positive sign, though this is usually absent in recurring attacks. In the prone position there is sharply localized tenderness over the internal cartilage in front of the internal lateral ligament over the joint line an inch and a quarter to the inner side of the lower end of the patella. An enlarged retropatellar fat pad may simulate the condition, but the catch is slighter, with creaking beneath the patella and a distinct doughy thickening at the sides of the bone. A negative *x*-ray report eliminates chronic arthritis, and instability due to lax ligaments can be ruled out by comparing both knees. If the case is seen soon after the accident and the patient is walking on a flexed knee the cartilage may be reduced by flexing the leg on the thigh to about 45 degrees below full extension with the patient lying on his back. The leg is then rotated inwards and abducted and then suddenly extended while the inward rotation is maintained. Weight bearing may be allowed except in a marked case with first displacement, a Thomas heel helping to maintain abduction and inward rotation and so guarding against recurrence. For frequent displacements removal is necessary; the authors prefer the method of Sir Robert Jones. They state that the prognosis is excellent provided no arthritis, joint irritation, or lax ligaments are present, and they emphasize the fact that the method does not involve a stiff joint.

649. Cerebral Thrombosis following Ligature of the External Carotid Artery.

H. HERFARTH (*Zentralbl. f. Chir.*, May 1st, 1926, p. 1106) records three fatal cases of cerebral thrombosis occurring within a year after ligature of the external carotid as a preliminary to operations for epithelioma of the tongue. In the first patient left hemiplegia supervened sixteen days after the operation, and the patient died four days later. The external carotid had been ligatured as usual above the origin of the superior thyroid artery; a secondary thrombus filled the lumen below the ligature as far as the superior thyroid; a portion of this thrombus had broken away and had been carried to the middle cerebral artery. The internal carotid contained no clot. The mortality of this complication has been estimated at 1.54 per cent. The author observes that it is most important to use absolutely aseptic ligatures in this operation, such as Perthes's strips of fascia.

650. Vesical Lesions due to Urotropine.

O. GRAGERT (*Zentralbl. f. Gynäk.*, May 1st, 1926, p. 1195) observes that while urotropine has an undeniably powerful bactericidal action when given in acid solutions, it is very doubtful whether formaldehyde is evolved in the genito-urinary tract when the drug is given by the mouth or injected intravenously. When a 40 per cent. urotropine solution is given by the latter route, it is probable that any resultant improvement is due to the powerful diuretic action of the drug flushing out the bladder. The author describes three cases in which haematuria and severe vesical tenesmus followed the administration of urotropine. A woman who had already a *B. coli* cystitis was submitted to a supra-vaginal hysterectomy and right oöphorectomy for myomata. The next day a dose of 10 c.cm. of urotropine was given intravenously. Immediately afterwards severe tenesmus with haematuria and excessive diuresis occurred. The bladder could scarcely hold 10 c.cm. of urine and the patient was obliged to urinate every ten minutes. Morphine gave but temporary relief. Haematuria ceased on the third day, but tenesmus and dysuria persisted for a week, in spite of irrigation with boric lotion. The second patient, a primipara, aged 31, after a difficult forceps delivery, had retention persisting for several days. Intravenous injection of 5 c.cm. of urotropine was followed by severe tenesmus and haematuria, necessitating irrigation of the bladder and prolonged sedative treatment. The third patient, who had had eclampsia during a confinement three years previously, had suffered subsequently from persistent pain in the right loin. The urine contained vesical epithelium, relatively few leucocytes, and no bacteria. Early right pyelitis was diagnosed, and the patient received 0.5 gram of urotropine by the mouth thrice daily; after twenty-four hours, when she had taken only 1.5 grams, she suddenly had severe tenesmus and haematuria and was obliged to urinate every five or ten minutes. This was relieved by atropine and local treatment. A cystoscopic examination showed many submucous haemorrhages. The urine flowing from the ureters was clear and free from blood and bacteria. Tests for tubercle bacilli were all negative. It is suggested that in one or more of these cases there was an angioneurosis or an idiosyncrasy for urotropine.

651. Prolapse of Rectum in the Male.

U. MAES and J. D. RIVES (*Surg., Gynecol. and Obstet.*, May, 1926, p. 594) describe a plastic operation on the levatores ani and pelvic fascia for complete prolapse of the rectum in adults, and give notes of three cases. Their procedure is based on the assumption that the cause of the defect is the presence of an abnormally long cul-de-sac, as suggested by Quénu and Moschcowitz, together with relaxation of the lateral ligaments, the levator muscles, and the sphincter ani. In the lithotomy position, after reduction of the prolapse, an inverted Y incision, with the arms extending round the anus, is made to expose the external sphincter, which is then freed from the central tendon of the perineum by cutting across the ano-bulbar raphé. The anterior quadrant of the sphincter is excised and the muscle sutured end-to-end. The levator ani is exposed by deepening the incision, and its median margins are separated by blunt dissection. With a guiding finger in the rectum its anterior and lateral walls are cleared by blunt dissection as far as the lateral ligaments. The prostate and seminal vesicles are pushed forward and any reflection of peritoneum carefully pushed up until the prostate is exposed in front and the adventitia of the rectum behind. The lateral wall of the space is now formed by the superior surface of the levator ani covered by the pelvic fascia, and, commencing at the apex, sutures are introduced to approximate the levator muscles and suspend the rectum, several transverse stitches being taken across the lateral and anterior aspects of the rectal walls. With three or four sutures the levatores are approximated and the rectum suspended, closing the depth of the cul-de-sac. A last suture approximates the free margins without picking up the rectum, so that the anus is thrown backward to produce the normal angulation of the canal. The authors state that the procedure is not difficult, is without shock, and can be performed under spinal or local anaesthesia. They consider that it offers a satisfactory technique for cases free from complications and in which the prolapse is not extreme.

Therapeutics.

652. Calcium in Ovarian Insufficiency.

A. CRAINICIANU (*Presse Méd.*, May 1st, 1926, p. 545), as the result of careful research into the conditions underlying ovarian insufficiency, has found that the administration of calcium is particularly effective. He recommends the daily administration by the mouth of between 90 and 120 grains of calcium lactate in cachets, each containing about 20 grains. The treatment should be continued for ten days, and, if necessary, should be repeated after an interval of a few days. The total duration of treatment varied, but on the average amounted to about fifteen to twenty days. He reports that very satisfactory results followed the use of this salt in ovarian insufficiency. Alphandary has obtained equally good results by intravenous injections, but the present author prefers the oral route as being easier and equally satisfactory. He finds that even in still stronger doses than those recommended calcium was well tolerated by his patients and produced no digestive trouble. The constipation usually present with ovarian insufficiency was dealt with simultaneously. The results of treatment were found to be permanent. Crainicianu discusses the production of ovarian insufficiency, both congenital and acquired, and relates it to a loss of tone, associated with sympathetic or parasympathetic disorders. He gives the details of five cases to illustrate the employment of calcium lactate after hysterectomy and in the treatment of amenorrhoea.

653. Treatment of Infantile Eczema.

E. FEER (*Rev. Méd. de la Suisse Romande*, March 10th, 1926, p. 137) divides the causes of infantile eczema into two classes—namely, predisposing and exciting. He describes two forms of the disease: (1) Generalized eczema, seen chiefly in young infants, is usually characterized by a seborrhoeic eczema, fatty crusts, and intertrigo. It often appears in infants with severe digestive disorders and diarrhoea. The intertrigo may suggest a syphilitic lesion. Among the more severe forms of this group must be included cases of desquamating erythrodermia. (2) Eczema of the scalp, often extending to the cheeks, is more common in older infants. Typically this form may be mistaken for impetigo, or the latter may be implanted upon it. The first point in treatment is to correct errors of diet; overfeeding should be stopped in fat infants. Breast-fed infants should have four or five feeds a day, one or two of which may be replaced by malted soup, buttermilk, or farinaceous soups. At 4 to 5 months fruit and vegetables may be given. Hand-fed children should have their ration of cow's milk cut down to 400, 300, or even 200 grams a day. With the milk farinaceous food, oatmeal, fruit, and vegetables may be given. In place of whole milk skimmed milk or buttermilk may be substituted. The diet should be so regulated that a fat infant should gain no weight over a long period, and if very fat should lose 1 or 2 kilograms. When the diet has been well regulated and not excessive it should not be cut down. For external application olive oil and cold cream are recommended. In papular eczema zinc oxide 25 per cent. and talc powder 75 per cent. are applied after the cold cream; for pruritus, 1/4 to 1/2 per cent. of thyroid or menthol in alcohol, painted on freely, or 2 to 3 per cent. of anaesthesine in powder form. For papular eczema and pruritus Feer advises equal parts of zinc oxide, glycerin, and talc powder up to 25 grams with alcohol and distilled water, of each 12.5 grams, a dusting powder being used after the application. When sleep is disturbed, chloral 0.1 to 0.2 cg. is indicated. To prevent scratching, the hands should be bandaged. In eczema of the head a dressing of boric vaseline, not impermeable, should be applied and renewed daily; in two to four days the crusts should come off easily; they should not be pulled off for fear of causing hyperpyrexia, convulsions, or even sudden death. When the condition beneath appears moist, several layers of gauze soaked in a 1 in 10 solution of alum acetate, covered with cotton-wool, not impermeable, and renewed three to five times a day. When the inflammation and discharge have diminished, a paste of zinc oxide, talc, lanoline, and vaseline (of each 25 grams) should be applied, covered by a mask with openings for the eyes, nose, and mouth. The addition of 1 to 5 per cent. of lénigallol often diminishes discharge, and of 3 to 10 per cent. of tuménol eases pruritus. In certain cases of

moist eczema painting with 1 to 2 per cent. of silver nitrate before the application of the paste aids the cure. This method is also applicable in cases of intertrigo. The author has found coal-tar a most valuable remedy in cases of dry or slightly moist eczema. It is contraindicated in suppurating conditions. It should be painted on with a camel-hair brush, allowed to dry for a moment, then powdered thickly over with zinc oxide and talc powder, and covered with a porous dressing. The tar dressing will separate after a few days; portions may have to be helped off with olive oil. Occasionally there may be some oozing, when the author uses naphthalene 50 grams, zinc oxide and talc powder, of each 25 grams. When peeling commences he advocates zinc oxide and bismuth subnitrate in ointment preparations. Most cases should be cured in two to eight weeks. In chronic intractable eczemas arsenic should be exhibited in the form of Fowler's solution, 1 or 2 drops daily; alkaline waters are also of value.

Laryngology and Otology.

654. Tumour of the Auditory Nerve.

G. ZANETTI (*Arch. Ital. di Otol., Rinol. e Laringol.*, February, 1926, p. 92) describes a case of a woman, aged 75, who had a tumour of the right auditory nerve. It was the size of a small nut, appeared to be almost pedunculated, and sprang from the region of the internal auditory meatus, being lightly attached to the facial nerve and the pons. The structure of the brain did not show any appreciable change. A wedge-shaped piece of the cranium was removed, including the internal meatus and the tumour. The tumour, which had a clear-cut fibrous capsule, consisted of compact fibrillary fibrous tissue with numerous blood vessels; the latter were present to such an extent that the author describes the tumour as a fibro-angioma. He adds that it is usually very difficult to detect any true nerve tissue in these tumours, but it certainly occurs in some. The tumour may develop within the lumen of the internal auditory meatus, or it may spring from the free extracanalicular portion of the nerve; it arises from the sheath of the nerve and has a very wide area of attachment. In the present case there was no dilatation of the internal meatus, though this may occur to a marked extent. In life attention is drawn to these tumours by unilateral symptoms implicating the seventh and both parts of the eighth nerve.

655. Lymphoid Tumours of the Nasopharynx.

BARRET DE NAZARIS (*Rev. de Laryngol., d'Otol. et de Rhinol.*, February, 1926, p. 71) thinks that the rarity of any reference in the literature to lymphoid tumours in the nasopharynx is due to incomplete pathological examination. Lymphomas are hyperplasic tumours characterized by masses of lymphoid cells in the meshes of a distinct reticulum. They may be part of a disease of the whole lymphoid system, but Torretta and Ferreri suggest an infective origin, though bacteriological investigations have so far proved inconclusive. The section shows a uniform appearance of lymphoid cells in compact mass, the traces of normal glandular structure having been lost; on higher magnification a very delicate stroma is distinguished, including a number of endothelial cells. The lymphoid cells consist of lymphoblasts and lymphocytes; macrophages are present, and their abundant and clear cytoplasm contains droplets of chromatin due to the digestion of cells of the tumour. The lymphoid cells sometimes pass into the circulatory system, but they never give rise to metastases. The disease is rarely seen in its early stages, and the first obvious signs are respiratory difficulties, deafness, or swelling of the carotid region. The orifices most frequently attacked are the choanae, the tubal orifices, and the communication between the nasopharynx and the oropharynx. Nasal respiration is quickly suppressed and Eustachian obstruction is an early symptom. Slight epistaxis and swelling of the glands of the neck appear early. On rhinoscopy the tumour is seen to consist of a smooth rose or violet coloured mass, soft to the probe, and moving with the palate; the whole of the nasopharynx is filled with an enormous mass of adenoid-like growth, with a doubtful site of attachment. The disease progresses rapidly in the whole lymphatic system, especially of the neck and mediastinum, and usually terminates fatally in a few months. In a child it is impossible to distinguish between an early lymphoma and adenoid growth, but later, when the cavity is completely filled, this difficulty does not exist. Fibroma of the nasopharynx is unlikely after 25; it is smoother, harder, and gives rise to serious haemorrhages. Epitheliomas are generally smaller, they bleed, and are ulcerated. Lymphomas are most easily confused with sarcomas of the pharynx, but in the latter there is no trace of invasion of the glands. Surgical intervention leads only to generalized hyperplasic degeneration. MacBride claims to have cured two cases with arsenic. Temporary amelioration follows diathermo-coagulation or electrolysis. Radium and *x* rays are not very practicable owing to the scattered and diverse nature of the growth. Short wave-length radiations result in the rapid destruction of the nasopharyngeal tumour at first, but new glandular tumours develop with great rapidity and bring about an early fatal termination.

656. Chordoma of the Cervical Vertebrae.

W. S. SYME and D. F. CAPPELL (*Journ. of Laryngol. and Otol.*, April, 1926, p. 209) describe a case of a man of 59 who, two months previous to admission to hospital, had suffered from shooting pains in the neck when he moved his head from side to side. Pain was succeeded by stiffness of the neck, which was later accompanied by difficulty in swallowing and defective articulation. A tumour was found in the posterior wall of the pharynx extending up into the nasopharynx and down into the laryngopharynx. It was situated behind the pharyngeal wall, but there was no ulceration of the mucosa. The growth was exposed through an incision carried from the tip of the mastoid process downwards along the anterior border of the sterno-mastoid muscle. It was free from the pharyngeal wall, but was firmly attached to the vertebral column and was found to be invading the body of the third vertebra and adjacent portions of the second and fourth vertebrae, from which it was separated with difficulty. The deep part was curetted and the diathermy button applied. The patient made an uneventful recovery, but was readmitted to hospital six months later with recurrence in the site of the original growth. The growth was now ill defined and widespread, reaching up to the base of the skull and downwards to the fifth cervical vertebra, with numerous lateral extensions into the prevertebral muscles. It was removed as far as possible and the diathermy button again employed over the cavity, but the patient developed septic pneumonia and died three days later. The body of the third cervical vertebra was so much destroyed that only a thin shell of bone separated the growth from the spinal canal; there was, however, no evidence of any invasion of the spinal canal or meninges or of pressure on the cord. There was invasion of the second and fourth cervical vertebrae, and of the retropharyngeal tissues overlying the fifth and first. The brain substance was found to be healthy. Histologically the growth proved to be a cellular malignant tumour with broad strands of epithelial cells many layers deep, resting on a delicate connective tissue core, and solid alveoli of epithelial cells resting on a rather dense fibrous stroma. In the border areas of stroma which comprised the capsule of the tumour there were small cord-like structures closely resembling notochord in the earlier developmental forms in lower animals. The tumour cells presented very varying characters in different parts of the growth, but their general character was in conformity with their origin from notochordal remnants, reproducing the various stages in the ontogeny of the notochord. The authors have not seen any account of this feature in the previously published cases of chordoma. In the BRITISH MEDICAL JOURNAL of May 22nd, 1926 (p. 862), a case of sacro-coccygeal chordoma was recorded by Mr. A. Richardson and Mr. A. L. Taylor of Leeds. The patient recovered after operation, but it was considered probable that recurrence would take place.

Obstetrics and Gynaecology.

657. Suprapubic Transperitoneal Caesarean Section.

A. BRINDEAU (*Presse méd.*, March 10th, 1926, p. 305) claims the following advantages for this method over the ordinary Caesarean section: (1) The skin incision need not be so long. (2) The haemorrhage is less severe. (3) The operative shock is less. (4) Cicatrization of the uterine wound involves a zone which remains in a state of rest, whereas in ordinary Caesarean section the sutures are applied to the body of the uterus, which contracts vigorously for the first few days after delivery, and tend to cut through the uterine tissues. This does not occur when the lower uterine segment is sutured. (5) In case of infection of the peritoneum there is a greater likelihood of the infection being limited to the pelvic peritoneum. (6) Post-operative intestinal obstruction and adhesions to the intestine or great omentum hardly ever occur. On the other hand, the drawbacks of the low operation are as follows: (1) The operation takes a little more time and is distinctly more difficult than the ordinary method. (2) The delivery of the child is somewhat difficult and may require the application of forceps. The results of the operation are satisfactory. Of 1,200 cases collected by Marassy the mortality was only 3 per cent. The method is chiefly indicated in pelvic deformities and in haemorrhage due to placenta praevia.

658. Adenoma of the Cervix Uteri.

ACCORDING to E. DOUAY and A. SOÏMARU (*Gynécol. et Obstét.*, 1926, xxiii, 4, p. 245), it is important to remember that adenoma of the cervix uteri, although a benign epithelial tumour, not infrequently becomes malignant. When this is suspected care should be taken to remove a fragment for examination from the hardest and most readily bleeding portion. Most commonly adenoma of the cervix is found between the ages of 30 and 50 years, but it may occur after the menopause. It is not an inflammatory lesion and there is little evidence that precurrent inflammatory conditions have an important etiological relation with it. The histological lesions common to all its forms consist in hyperplasia of the cervical glands with intraglandular epithelial vegetations and penetration of the glandular culs-de-sac within the neighbouring connecting tissue. Mitotic figures are never seen. Macroscopically in about four-fifths of the cases there is diffuse adenoma, with a regularly hypertrophied cervix, dark red, firm, and elastic. The other or partial forms are localized vegetating adenoma, adenomatous polypus developing within the cervical canal, and cystic adenoma which in the early stages resembles Naboth's ovules. The symptoms have an insidious onset with vague lumbo-sacral pain. A glairy discharge is invariably present and may be very abundant; it is transparent, but may have a rosy or amber tinge. To palpation the tumour appears firm, elastic, and granular. Purulent discharge is not present except after secondary infection. Adenoma of the cervix does not bleed readily; the occurrence of slight haemorrhage after coitus or medical examination is suggestive of carcinomatous metaplasia, and should lead to microscopical examination of a carefully excised fragment. In treatment the application of antiseptics is useless if not harmful; the effects of carbonic acid snow, radium, and diathermy are not permanent. The authors recommend complete destruction by caustic or cautery, or amputation of the cervix.

659. Diagnosis of Disease of the Urinary Tract in Women.

T. J. MCBEE (*Med. Journ. and Record*, February 17th, 1926, p. 242) states that the close anatomical and physiological relations between the urinary tract and the reproductive organs in the female warrant an examination of both systems when disease is suspected in either. A large percentage of what are termed "female troubles" in girls and young women are urological conditions or urological and gynaecological conditions combined. Investigation of a case of this kind should therefore include a careful study of the clinical history, complete physical examination, and the investigation, both macroscopical and microscopical, of the urine. The presence of blood in the urine demands a further examination by means of the cystoscope, if possible while blood is still present, and the functional ability of each kidney should be ascertained. Cystitis rarely, if ever, occurs as a primary infection, so that symptomatic treatment is useless unless the primary focus is also dealt with. Primary cystitis is unaccompanied by any rise in temperature. Catheterization followed by chills and fever is due to a previous existing pyelonephritis. McBee considers stricture of the ureters to be one of the most common lesions occurring in the female abdomen and advises their dilatation; from this treatment he has had many good results, large "tumour masses" being found to disappear following the dilatation. Tuberculosis of the urinary tract in a woman should always be suspected when the bladder is intolerant of warm bland fluids, if the urine is persistently acid, or if the bladder capacity is reduced to four ounces or less, if one half of the trigone is more involved than the other, or if there are obstinate ulcers on the bladder wall or marked distension of the ureteral orifices. Similarly, persistent pyaemia in a woman between 15 and 40 years of age with no pathogenic organisms detectable by ordinary methods should give rise to suspicion of tuberculosis; the urine should be examined repeatedly for tubercle bacilli and guinea-pigs be injected. Renal tuberculosis alone gives rise to practically no symptoms.

Pathology.

660. A Microscopical Precipitation Test for Syphilis.

B. S. KLINE and A. M. YOUNG (*Journ. Amer. Med. Assoc.*, March 27th, 1926, p. 928) give a preliminary report of a microscopic slide precipitation test for syphilis which they recommend on the grounds of economy of apparatus, simplicity, easier reading of results, and less serum required than in other tests. The results obtained by this micro-method were found to run parallel with those of the ordinary routine Kahn and Wassermann tests. Glass slides are washed with soap, well rinsed in water, placed in 95 per cent. alcohol for a short time, dried and flamed. Four paraffin rings are made on the slides. The antigen is diluted and titrated as in the Kahn test; it should be used quickly, since some antigens lose their value after fifteen minutes, though most remain good for three-quarters of an hour. The serums are prepared as for the Wassermann test and heated for one hour at 56° C. Into each paraffin ring 0.05 c.cm. of undiluted serum is placed and then 0.015 c.cm. of Kahn's antigen dilution; the mixture is rapidly stirred, and a specially devised cover is placed over the slides to prevent evaporation. After ten minutes the first slide is removed and rocked and rotated by hand for about a minute. The reading is made under a 16 mm. objective with a 10 or 12.5 ocular, the light being cut out as in the examination of a urinary deposit. The result is expressed according to the size of the clumps formed. It is suggested that the test should be controlled by using various antigens. The authors believe that this test will be found of special value when only small quantities of serum are available, and in emergency blood transfusions for excluding syphilis in the donor.

661. The Intracutaneous Method of Testing for the Virulence of Diphtheria Bacilli.

M. KALMYKOWA and M. GLUSMANN (*Centralbl. f. Bakt.*, May 5th, 1926, p. 308) report on the modification of the intracutaneous method of testing the virulence of diphtheria bacilli described by Havens and Powell. This modification consists in using the original mixed culture obtained from the patient, instead of purifying it before injection. The culture is inoculated intracutaneously into two guinea-pigs, one of which has been given a dose of immune serum some time previously; the reaction in the two animals is compared. A positive reaction is denoted by infiltration at the site of injection in the non-immunized guinea-pig, followed after three days by a typical necrosis; in the immunized guinea-pig there is no lesion at all. If organisms are present in the culture capable of giving rise to suppuration an abscess forms in both animals alike, but it is not followed by the typical necrosis unless virulent diphtheria bacilli are present also, and then only the non-immunized guinea-pig is affected. The authors plant the primary culture on inspissated horse serum, wash the growth off with saline, and standardize the suspension to 500 or 1,000 million organisms, depending on the number of diphtheria bacilli present microscopically. Of this suspension 0.2 c.cm. is injected intracutaneously into the shaved skin. The reaction can generally be read in twenty-four hours, and always within seventy-two hours. By this method they have examined in all 177 cultures, comparing the microscopical with the virulence tests. Of 60 microscopically positive cultures 4 proved to be avirulent; of 10 microscopically doubtful positives all proved to be virulent; of 13 doubtful negatives 2 were virulent; and of 86 definite negatives none were virulent. Since at least four to six tests can be made on a single guinea-pig it is clear that a considerable saving of time and money is obtained. It should be of special value in the testing of bacilli isolated from carriers.

662. The Prognostic Value of Lymphocytosis in the Sputum of Tuberculous Patients.

N. SANTANGELO (*Il Morgagni*, May 9th, 1926, p. 577) has examined the sputum, in many instances repeatedly, of 70 patients suffering from pulmonary tuberculosis. The extent of the disease was gauged by clinical examination, by radioscopy of the chest, and by bacteriological examination of the sputum. Films of the sputum were prepared and stained by the May-Grünwald-Giemsa method; cell counts were then made and the proportion of lymphocytes estimated. Of the 70 patients 50 were over 18 years of age. Of these the ones that showed progressive increase of the local lesion and a bad general condition contained less than 5 per cent. of lymphocytes in their sputum. On the other hand, those patients whose local and general condition was not deteriorating contained from 6 to 21 per cent. of lymphocytes. Patients who were becoming worse showed a progressive fall in the lymphocyte content of their sputum. The remaining 20 patients were under 18 years of age. The same observations were made, but the proportion of lymphocytes was considerably higher than in adults. The cases that were doing badly had a lymphocyte content of 10 to 12 per cent.; the cases that were doing well had a lymphocyte content of 12 to 23 per cent. Eight patients with combined tuberculosis and syphilis were found to have a much higher lymphocytosis than was warranted by the gravity of their condition. The author disclaims any diagnostic value for the test, but considers it useful for prognosis. The higher the proportion of lymphocytes in the sputum, and the greater the rise in the lymphocyte curve, the better is the outlook. Conversely a low proportion and a falling curve are of grave prognosis.